TCA
The Canadian Amateur

Canada's Amateur Radio Magazine
La Revue des Radioamateurs Canadiens
SEPTEMBER / OCTOBER 2013 – SEPTEMBRE / OCTOBRE 2013

Alberta Floods:
Crisis at High River

Situational report meeting at High River EOC (Photo: Dann St-Pierre, VE6TD)

Fast-moving floodwaters surrounding High River Hospital three-feet deep at 3 pm on June 20 (Photo: Marian Bryan, AHS)

High River EOC Incident Commander Ross Shapka briefs Alberta Premier Alison Redford (Photo: Ian Willumsen, VA6IAB)

Ray Bourne, VE6LG (centre) updates Vince d'Eon, VE6LK (right) on EOC status prior to shift change while Charles Nalder, VA6BCB listens in (left) Photo: Tom Cox, VE6TOX (AEMA)

Publications Mail Agreement # 40028682 Registration # 09866

Hamilton ARC Hosts RAC Annual General Meeting on October 5

Array Solutions Your Source for Outstanding Radio Products

Professional Grade Equipment from Array Solutions

Introducing the Shared Apex Loop Array™!

Now, you have a new interference fighting weapon in your receiving arsenal.

The Shared Apex Loop Array™ is a revolutionary receiving antenna that will change the way that you listen to the radio! The patented design provides performance in a size and over a range of frequencies that will please both the rag-chewer and DX'er alike.

The antenna is a true-time-delay array with four identical wire loops supported by a single non-conductive mast. Signals from each loop are transferred through a ferrite coupler to a short balanced line that connects to the switch/combiner/amp enclosure mounted at the base of the antenna.

Within this enclosure, signals from each loop are routed either directly to a combiner or through a delay line and then to the combiner, where they are amplified by a dual stage balanced broadband amplifier and sent out to the feedline to the controller located in the shack.

The controller connects directly to your receiver, and sends power and control signals over the feedline to the antenna.

Two models to chose from:

- **AS-SAL-18** – optimized for VLF, BCB, Low Band DXing, and shortwave to 15MHz, 20 foot tall about 40 foot footprint
- **AS-SAL-10** – optimized for BCB, and 3-30MHz , 12 feet tall, and 28 foot footprint

Rig Expert Antenna Analyzers

NEW!

See the full Rig Expert line including the new AA-170 on our Webpage!

BEKO VHF and UHF Amplifiers

BEKO VHF and UHF amplifiers (2m and higher) are now available from Array Solutions. These are considered the best solid state amplifiers in their categories and we have them!

New Analyzers from Array Solutions

AIM *uhf* Analyzer

NEW!

NEW!

Expanded frequency coverage to1 GHz
See our web page for details

Introducing the

VNA *uhf* two-port Vector Network Analyzer

NEW!

- Frequency range from 5 kHz to 1 GHz
- Data plots include SWR, RL, R + X, series and parallel, magnitude, phase, and more
- Dual Smith charts with rotation and 20 markers
- Plots and calibration files can be saved and used anytime in cvs and dynamic formats.
- True TDR function.

NEW!

PowerMaster II

- New Larger, Sharp & Fast LCD Display
- Reduced Energy consumption
- USB and RS-232 interface built-in
- New - Both 3kW and 10kW couplers on one display - switched
- Supports 2 like couplers simultaneously (3kW & 3kW, 3kW & V/UHF, 10kW & 10kW)

Other top-quality brands represented by Array Solutions...

ACOM · AY · Custom Metalworks · FRITZEL · hofi · M² Antenna Systems · OM Power · OPTIBEAM · PHILLYSTRAN · Pro.Sis.Tel. · REX · SSB · W3NQN · Yaesu

ARRAY SOLUTIONS

www.arraysolutions.com

Sunnyvale, Texas USA
Phone 214-954-7140
sales@arraysolutions.com
Fax 214-954-7142

Check our webpage for more new products!

Array Solutions' products are in use at top DX and Contest stations worldwide as well as commercial and governmental installations. We provide RF solutions to the DoD, FEMA, Emcomm, UN, WFO, FAA and the State Dept. for products and installation of antennas systems, antenna selection, filtering, switching and grounding. We also offer RF engineering and PE consulting services.

SEPTEMBER-OCTOBER 2013

TCA
The Canadian Amateur

SEPTEMBRE-OCTOBRE 2013

Editor / Rédacteur en chef
Alan Griffin
Email: <tcamag@yahoo.ca>

All correspondence, submissions, advertising subscription inquiries should be sent to :
The Canadian Amateur
720 Belfast Road,
Suite 217
Ottawa, ON, Canada
K1G 0Z5
Tel. 613-244-4367;
1-877-273-8304
<tcamag@yahoo.ca>
Website: <www.rac.ca>

La correspondance, les communications et les questions relatives à la publicité et aux abonnements doivent être adressées à :

The Canadian Amateur
720 rue Belfast
Bureau 217
Ottawa, ON, Canada
K1G 0Z5
Tel. 613-244-4367;
1-877-273-8304
Courriel : <tcamag@yahoo.ca>
Site Web : <www.rac.ca>

Printed in Canada by
St. Joseph Communications
Ottawa, ON, Canada
Imprimé au Canada sur les presses de St. Joseph Communications
Ottawa, ON, Canada

Publications Mail Agreement No. 40028682
Registration No. 09866
Return Undeliverable Canadian Addresses to Circulation Department:
217-720 Belfast Rd
Ottawa, ON K1G 0Z5

Canada's Amateur Radio Magazine
La Revue des RadioAmateurs Canadiens

VOLUME 41 NUMBER 5 – TCAMAG@YAHOO.CA – WWW.RAC.CA/TCA

OUR COVER: ALBERTA FLOODS – CRISIS AT HIGH RIVER

"Of course, I thought to myself that the weatherman is mostly almost wrong with a forecast, but I really hoped for bad forecasting skills as the rain hit the window and my back deck.

Snow in the mountains sticks around until mid or late July but this year would be very different.

Little did we know our Field Day would be one of the largest EmComm events the Province of Alberta had ever seen and testing our limits far beyond our Field Day planning.

Just 24 hours after our planning meeting was held, 18 towns and municipalities would be under a State of Local Emergency for the worst flooding ever seen here. " – see page 42.

NATIONAL & INTERNATIONAL

TECHNICAL

NEWS FROM AROUND THE CORNER

DEPARTMENTS

**Please visit the Members Section of the RAC website for a full colour e-version of TCA!
An Adobe Flash Player mode of viewing is available in addition to a PDF version.**

OPERATING

ARTICLES WANTED:
PLEASE SEND YOUR ARTICLES IN NOW TO: TCAMAG@YAHOO.CA

PLEASE SUPPORT OUR ADVERTISERS

The Canadian Amateur is published in Canada six times per year to provide Radio Amateurs, those interested in radio communications and electronics, and the general public with information related to the science of telecommunications.

Articles, reviews, letters, features, suggestions, photographs and essays are welcomed. Manuscripts should be legible and include the contributor's name, call sign, phone number(s) and addresses (mail, email and packet, as applicable).

For a complete Author's Guide visit <www.rac.ca/authors_guide.htm>.

The Canadian Amateur is published by Radio Amateurs of Canada Inc., 720 Belfast Road, Suite 217, Ottawa, ON K1G 0Z5

Indexed in the Canadian Periodical Index:
ISSN 0834-3977.

Publications Mail Agreement No. 40028682.

Registration No. 09866.

The Canadian Amateur est publié par la société Radio Amateurs du Canada Inc., 720 rue Belfast, Bureau 217, Ottawa, ON K1G 0Z5.

Enregistré à l'Index des publications canadiennes sous le numéro ISSN 0834-3977.

Accord de publications diffusées par courrier : 40028682.

Numéro de matricule 09866.

THE RAC QSL BUREAU SYSTEM

The **RAC Outgoing QSL Bureau** service is available to RAC members, RAC affiliated clubs (club call only) and QSL Managers who are members of RAC. Your RAC membership number must accompany each shipment of QSL cards.

RAC Outgoing QSL Bureau
PO Box 11156, Station H
Nepean, ON K2H 7T9
Telephone: 613-670-3230
Email: <ve3exy@rac.ca>

There are limits and restrictions for use of the Outgoing QSL Bureau. For more information, surcharges and card sorting details, visit <www.rac.ca> or <www.magma.ca/~ve3exy/bureau.html>.

The **Incoming QSL Bureau** service is a user-pay system, using one of four methods – (**A**) envelopes (**B**) credits (**C**) labels or (**D**) combination credit with labels – to get cards to you. For more information on the incoming system visit <www.rac.ca>.

VE1 – VE0 Bureau (B)
Brit Fader Memorial QSL Bureau
Sponsored by the Halifax ARC
Tom Caithness, VE1GTC
PO Box 8895
Halifax, NS B3K 5M5
VE2 Bureau (A, B)*
Jacques Dubé, VE2QK
875 rue Sévère
Trois-Rivieres, PQ G9A 4G4
VE3 Bureau (D)
QSL Manager
PO Box 216
Streetsville, ON L5M 2B8
VE4 Bureau (B)
Adam Romanchuk, VE4SN
26 Morrison Street
Winnipeg, MB R2V 3B4
VE5 Bureau (B)
Joe Musgrave, VA5JM/VE5CEM
4510 39th Street
Lloydminster, SK
S9V 2B9
VE6/VA6 Bureau (B)
Rich Roadhouse, VE6AX
372 Cedarpark Drive SW
Calgary, AB
T2W 2J4
VE7 – VA7 Bureau (B)
Ken Clarke, VE7BC
12441 – 58A Avenue
Surrey, BC V3X 1X6
VE8 – VY0 Bureau (A, B)*
John Boudreau, VE8EV
PO Box 3099
Inuvik, NT X0E 0T0
VE9 – VY2 Bureau (B)
Bob Sherwood Memorial QSL Bureau
Sponsored by the Moncton Area ARC
Wayne Gillcash, VE1RR
Box 73
Moncton, NB E1C 8R9
VO Bureau (B, C)*
Rick Burke, VO1SA
Box 23099, Churchill Square
St. John's, NL A1B 4J9
VY1 Bureau (A, B)
Hugh Henderson, VY1HH
Box 33062
Whitehorse, YT Y1A 5Y5

(*Note: Method B is preferred).

Silent Keys – In Memoriam

With regret, we record the passing of these Amateur Radio operators.
TCA regrette de vous annoncer le décès des radioamateurs dont les noms suivent.:

VA3BUT – Robert Borden Burton, of Strathroy, ON, at age 94, on April 17, 2011
VA3RPW – Ray Williamson, of Hawkestone, ON, at age 91, on March 29, 2013
VA7HL – Harry Lyttle (VE7BUY), of Nanaimo, BC, at age 89, on June 25, 2013
VA7IK – Steve Kaposzta (VE7KSI), of Kamloops, BC, at age 85, on May 17, 2013
VE1DLB – Donald Beatty, of Bedford, NS, at age 91, on May 18, 2013
VE1DLE – David Engram, of Halifax, NS, at age 57, on May 12, 2013
VE2AKN – Raymond Laflamme, of Saint-Hubert, QC, at age 83, on June 8, 2013
VE2CPY – Michael Campey, of Pointe Claire, QC, at age 61, on May 27, 2013
VE3AAG – Norman Delahunty, of Etobicoke, ON, at age 97, on July 15, 2013
VE3BIG – Ron Gardner, of McGregor, ON, at age 76, on June 30, 2013
VE3BSS – Bert Somerton, of Lakehead, ON, at age 89, on May 31, 2013
VE3EB – Earl Bray, of Parksville, BC, at age 91, on April 29, 2013
VE3GIN – Gordon Mitchell, of Brantford, ON, at age 71, on June 21, 2013
VE3JCB – Alan Clendenning, of Sault Ste Marie, ON, at age 68, on February 11, 2013
VE3MFH – Peter Foerster, of Beamsville, ON, at age 76, on July 6, 2013
VE3MNX – Carol Brown, of Sudbury, ON, at age 78, on June 4, 2013
VE3MTT – George Kolozsvari, of Acton, ON, at age 70, on September 27, 2011
VE3MZK – Ted Leaper, of Cobalt, ON, at age 65, on May 23, 2013
VE3OUM – George (Bud) Moreton, of Markham, ON, at age 92, on July 11, 2013
VE3SHC – Bob Potts, of Nepean, ON, at age 72, on June 28, 2013
VE3ZG – Mike Nawrocki, of Thunder Bay, ON, at age 78, on November 30, 2012
VE3ZUF – Ernest Latal, of Etobicoke, ON, at age 87, on May 14, 2013
VE4JCK – Jack Thibodeau, of Stonewall, MB, at age 69, on November 20, 2012
VE4KV – Doug Hawley (VA7RA), of Victoria, BC, at age 64, on June 1, 2013
VE4VM – Victor Magian, of Winnipeg, MB, at age 88, on June 3, 2013
VE5CO – Raymond Furneaux, of Watrous, SK, at age 92, on July 6, 2013
VE6AQH – Norman Sproule, of Calgary, AB, at age 94, on July 9, 2013
VE6DBA – Bill Bretsch (VE6YOD), of Cold Lake, AB, at age 66, on January 11, 2013
VE6GH – Grant Heimbecker, of Calgary, AB, at age 81, on April 19, 2012
VE7ALJ – Hal Fryer, of Salt Spring Island, BC, at age 94, on June 13, 2013
VE7BBH – Ernie Frederick, of Chemainus, BC, at age 92, on November 1, 2011
VE7FZ* – Edwin Hohertz, of Cambridge, ON, at age 64, on April 28, 2012
VE7KC – Al Miller, of Penticton, BC, at age 97, on October 1, 2012
VE7LY – Al Ramsay, of West Vancouver, BC, at age 94, on July 17, 2013
VE7VX – Michal Glowa, of Prince George, BC, at age 82, on January 3, 2012
VE7WW – Charlie Mackie, of North Saanich, ON, at age 93, on May 25, 2013
VE9AJB – Jim Ballard, of Hampton, NB, at age 97, on June 12, 2013
VE9NL – Neil Lynch, of Fredericton, NB, at age 86, on June 16, 2013
VE9NXL – Bernard Fetter, of Quispamsis, NB, at age 93, on June 17, 2013
VO1TA – Wayne Smith (VO1WET), of Heart's Delight, NL, at age 59, on July 1, 2013

*Note: In the above list an * indicates a previous call sign or that a call sign has been reissued. The list of Silent Keys is prepared by volunteers at RAC Headquarters at <rachq@rac.ca>.*

RAC NATIONAL INCOMING QSL BUREAU

Following changes made to the RAC QSL Bureau system, RAC members are reminded that all VE/VA cards to VE/VA Amateurs are to be sent to the RAC Incoming Bureau in Saint John, New Brunswick and not to the Outgoing QSL Bureau. This QSL service is only available to RAC members. RAC National Incoming QSL Bureau: PO Box 51, Saint John, NB, E2L 3X1

RADIO AMATEURS OF CANADA / RADIO AMATEURS DU CANADA

NATIONAL EXECUTIVE

PRESIDENT
Geoff Bawden, VE4BAW
85 Barrington Avenue
Winnipeg, MB R2M 2A6
Tel. 204-295-0714
Email: ve4baw@rac.ca

FIRST VICE-PRESIDENT AND REGULATORY AFFAIRS OFFICER
Ian MacFarquhar, VE9IM
7 Charleston Court
Rothesay, NB E2E 4W9
Tel. 506-849-2099
Email: ve9im@rac.ca

CHIEF FIELD SERVICES OFFICER
Doug Mercer, VO1DTM
Box 1042
84 Main Road
Goulds NL A1S 1H2
Tel. 709-364-4741
Email: vo1dtm@rac.ca

ATLANTIC
Everett Price, VO1DK
6 Virginia Road
St John's, NL A1A 3A8
Tel. 709-738-3508
Email: vo1dk@rac.ca

MIDWEST
Derek Hay, VE4HAY
51 St. Hilaire Place
Winnipeg MB R2J 4B5
Tel. 204-257-1420
Email: ve4hay@rac.ca

CHIEF INFORMATION AND TECHNOLOGY OFFICER
Paul Burggraaf, VO1PRB
51 Greenspond Drive
St. John's, NL A1E 5Z9
Tel. 709-745-1999
Email: vo1prb@rac.ca

INTERNATIONAL AFFAIRS OFFICER
George Gorsline, VE3YV
118 MacPherson Avenue
Toronto, ON M5R 1W8
Tel. 416-921-4214
Email: ve3yv@rac.ca

RABC REPRESENTATIVE OFFICER
Norm Rashleigh, VE3LC
1611 Wainfleet Street
Orleans, ON K1C 3G3
Tel. 613-837-1733
Email: ve3lc@rac.ca

ALBERTA/NWT/NU
J. T. (Mitch) Mitchell, VE6OH
10438-139 Street
Edmonton, AB T5N 2K5
Tel. 780-446-8958
Email: ve6oh@rac.ca

ONTARIO NORTH/EAST
Bill Unger, VE3XT
165 Ridgecrest Road
Thunder Bay, ON P7B 7A1
Tel. 807-344-1848
Email: ve3xt@rac.ca

CORPORATE SECRETARY
Alvin (Al) M. Masse, VE3CWP
440 Maple Avenue
LaSalle, ON N9J 1P4
Tel. 519-734-0026
Email: ve3cwp@mnsi.net

HONOURARY LEGAL COUNSEL
Marcel D. Mongeon, VA3DDD
Suite 374
3-35 Stone Church Road
Ancaster ON L9K 1S4
Tel. 905-390-1818
Email: va3ddd@rac.ca

Help Wanted

RAC is looking for the following volunteers:

Deputy Director

Treasurer

Regulatory Affairs Officer

Public Information Officer

See inside for more information.

BRITISH COLUMBIA/YUKON
William (Bill) Gipps,
VE7ISV/VE7XS
9362 – 206A Street
Langley, BC V1M 2W6
Tel. 604-328-0111 Mobile
Email: Bill.Gipps@ideasmcs.com

ONTARIO SOUTH
Jeffrey Stewart, VA3WXM
5661 Bell Harbour Drive
Mississauga, ON L5M 5K2
Tel. 905-814-5882
Email: va3wxm@sympatico.ca

REGIONAL DIRECTORS

DEPUTY DIRECTORS

ATLANTIC
Len Morgan, VE9MY
MIDWEST
Allan Grant, VA4AJG
ONTARIO NORTHEAST
Glenn MacDonell, VE3XRA
QUEBEC
Normand Pitre, VE2NHK

ASSISTANT DIRECTORS

ALBERTA / NT / NU
Chris Cameron, VE8WD
Neal Sunderland, VA6NLS
Wally Gardiner, VE6BGL
Bill Till, VE5FN

ATLANTIC
Rino Deschenes, VE9VIC (North-Western NB)
Francis Pitre, VE9FCP (Acadie-Bathurst area)
Jim Fisher, VE1JF (Annapolis Valley/ Fundy Shore)
Bill Glydon, VY2LI (Western PEI)
David Hildebrand, VE9AV (Fredericton and area)
Terry MacInnis, VO1TJM (NL West Coast)
Marc Morel, VE1MAM (Edmundston, NB)
Vince O'Keefe, VO1SO (Avalon Peninsula)
Naz Simon, VO2NS (Labrador)
Peter Surette, VE1PJS (Truro and area)
Scott Wood, VE1QD (Halifax and area)
Sheldon Donaldson, VE1ARG (Yarmouth-Shelburne area)

BRITISH COLUMBIA / YUKON
Lou Beaubien, VE7CGE (Burnaby, BC)
Carl Bertholm, VE7CLC (Kelowna, BC)
Al Munnik, VE7RMP Langley, BC
Ron McFadyen, VY1RM (Whitehorse, YT)
Frank Merritt, VE7FPM (Nanaimo, BC)
Richard Thompson, VE7XT (Victoria, BC)
Ross Wilmot, VA7NRW (Surrey, BC)

MIDWEST
Richard Holder, VE4QK
Doug Pfaff, VE5DCP
Bill Till, VE5FN

ONTARIO NORTH/EAST
Allan C. (Al) Boyd, VE3AJB
Paul Caccamo, VA3PC
Dave Hayes, VE3JX
Dan Howard, VA3MA
Don Tambeau, VE3HOL

ONTARIO SOUTH
Keith Baker, VA3KSF (Sarnia)
Jerry Beneteau, VE3EXT (Essex & Kent)
Doug Campbell, VA3DC (Simcoe)
Doug Frame, VE3JDF (Niagara)
Stan Leschinsky, VE3TW (Greater Toronto Area)
Gordon Moogk, VE3DBP (Grey-Bruce)

RAC SECTION MANAGERS

ALBERTA
Garry Jacobs, VE6CIA
45 Selkirk Blvd.
Red Deer, AB T4N 0G4
ve6cia@rac.ca

BRITISH COLUMBIA/YUKON
Paul Giffin, VA7MPG
1749 Tashtego Crescent
Gabriola Island, BC V0R 1X5
guppy1@shaw.ca

MANITOBA
Jan Schippers, VE4JS
202 Sadler Avenue
Winnipeg, MB R2M 1P3
ve4js@rac.ca

MARITIMES
Craig Seaboyer, VE1DSS
136 Ohio Lake Road, RR 1
Antigonish, NS B2G 2K8
cseaboye@stfx.ca

NEWFOUNDLAND-LABRADOR
Vacant

ONTARIO NORTH
Allan Boyd, VE3AJB
27 Red Mill Road, Box 208
Little Current, ON P0P 1K0
ve3ajb@vianet.ca

ONTARIO SOUTH
Ian Snow, VA3QT
42 Eileen Drive
Barrie, ON L4N 4L6
va3qt4@gmail.com

ONTARIO EAST
Michael Hickey, VE3IPC
2768 Chartrand Road
Lefaivre, ON K0B 1J0
ve3ipc@gmail.com

ONTARIO GTA
George Duffield, VE3WKJ
49 Ridgehill Drive
Brampton, ON L6Y 2C3
ve3wkj@sympatico.ca

QUEBEC
Vacant

SASKATCHEWAN
Barry MacKenzie, VE5TRF
1001 – 12th Avenue SW
Moose Jaw, SK S6H 6N2
ve5rtf@sasktel.net

See pages 56-61 for Section Reports.

QUEBEC
Sheldon Werner, VA2SH/VA6SH
4225 Place Sainte-Helene
Laval, QC H7W 1P3
Tel. 450-973-3418
Email: va2sh@rac.ca

For RAC Membership Inquiries and Change of Address please contact RAC HQ at <rachq@rac.ca>.

FEEDBACK READERS WRITE TO THE CANADIAN AMATEUR

TCA SUBMISSIONS AND EDITING POLICY

The Canadian Amateur welcomes articles, reviews, letters, features and photographs.

Submissions should be of interest to Radio Amateurs.

We are always looking for articles, both technical and non-technical, on a wide range of topics in keeping with the diversity of Amateur Radio.

All submissions that are approved for publication in TCA will appear in ***both*** *the print version and electronic (Web) versions of TCA.*

All author's must agree to the terms of the RAC Author's Agreement before an article can be published in TCA.

The RAC Author's Agreement and Explanatory Notes can be found on the TCA webpages at http://www.rac.ca/tca.

In addition a complete Author's Guide is available online at http://www.rac.ca/tca/authors_guide.htm>.

Material may be submitted electronically or sent by regular mail, but an email submission is preferred.

All submissions are eligible to be included in TCA, space permitting, at the discretion of the Editor.

All material in TCA is subject to editing for length, clarity, style, punctuation, grammar, libel and taste.

We regret that all submissions cannot be acknowledged.

Please send all submissions by email to the Editor at:
tcamag@yahoo.ca
Or by mail to:
The Editor
720 Belfast Road, Suite 217
Ottawa, ON K1G 0Z5

Deadlines for TCA
November-December
September 15
January-February
November 15

(WELL ORDERED) RANDOM THOUGHTS

The inaugural installment for Dirk (VY1NM) Moraal's new column "Random Thoughts" (May-June 2013 TCA, p. 27) cleverly belies its title with well ordered logic that brought a satisfying resolution to a recent personal dilemma about proper call sign usage.

Dirk Moraal might refer to my dilemma as a "conundrum" in call sign correctness. Whilst aboard my sailboat (*Staragan*) awaiting my turn to check-in with the evening VHF Caribou Net, my thoughts focused on what call sign to use: perhaps I should just use plain old VO1CPZ, but I was using a handheld so perhaps I should use VO1CPZ/P 'portable', but I was aboard a boat so perhaps VO1CPZ/MM 'marine mobile' might be correct but I was docked and not mobile. What to do?

As a newbie certified barely a year, I wanted to get it right; experienced hams would be listening and the fact that Doug Mercer, VO1DM, was net controller only added to the pressure. The page opposite (see page 4) will reveal that Doug is RAC's Chief Field Serves Officer. He is also President of the Society of Newfoundland Radio Amateurs (SONRA). I wanted to impress or at least hide my newbie awkwardness.

I wimped out and went with plain old VO1CPZ. Being a true gentlemen, Doug graciously thanked me for checking in and, although he knew I was aboard a docked sailing vessel, he choose not to embarrass me with an on-air correction. Thanks Doug.

I was indeed grateful for Doug's absolution but the dilemma remained unresolved until I encountered Dirk's column.

Admitting his love of words (a good thing for a columnist), Dirk assuaged my newbie awkwardness by reporting (admitting?) that he had faced the same "conundrum" in call sign correctness.

Whilst (a word Dirk is fond of and my British editors impose upon me) his admission in and of itself was enough to entirely justify the value of his column, Dirk went much further. Beginning with the call sign "conundrum" he formulates call sign "conjecture[s]" and from his conjectures he proffers a call sign taxonomy and thereby brings matters full circle to solve the conundrum and convey sweet resolution to this newbie's call sign dilemma.

Along the way, Dirk treats the reader to an invocation of the "philosophical posit" of "Occam's razor" and reveals his boyhood love for "big words", all done with his intention to "entertain and produce a few smiles in an otherwise serious world." Mission accomplished here, Dirk.

Thanks also for resolving my call sign dilemma, congratulations on becoming a TCA columnist, and best wishes for many more successful "Random Thoughts".

Jim Wyse, VO1CPZ
Newfoundland

ELECTRONIC TCA

I am responding to the item about our old QSL Cards and what to do about them either during a Ham's lifetime or when settling an estate by John Gilbert, VE3CXL that appeared in the May-June 2013 TCA.

A simple "Google" search for "QSL Museums" brings up a number of places that accept donations of QSL cards and other paper memorabilia such as correspondence, photographs and log books dealing with Amateur Radio.

A very active museum for your consideration is at: www.dokufunk.org/ located in Vienna, Austria. Use the English language link. This is the Documentary Archive Radio Communications and includes Amateur Radio, as well as Broadcast and it appears to be very active and professional.

We would all feel better knowing that our collection of cards was in the hands of a welcoming museum under our name and call sign, rather than in the recycle bin or landfill.

Gordon Hogarth, VE3CNA
Toronto, Ontario

ONLINE TCA IN COLOUR

Wow, I really must say this is a totally different magazine when seen in colour! I have (almost exclusively) been reading the hardcopy monochrome version all these years.

While I was reading this colour pdf version, I found myself reacting with each new page flip: "OMG, this is soooo beautiful!"

If most of our members still prefer the paper version, it would be amazing to be able to print a colour copy of this magazine, but I suppose the cost is excessive. Very well done!

Ed Sich, VE3WGO
Ottawa, Ontario

(I'm glad that you liked the eTCA. Thanks for taking the time to look at it. It certainly does look different in colour and it is a tribute to the hard work that each author and columnist contributes to TCA. Sadly, the cost to print in colour is prohibitive. The eTCA does provide an opportunity to see Amateur Radio in all its true splendour. Please spread the word around – TCA Editor)

A MESSAGE FROM THE PRESIDENT / UN MESSAGE DU PRÉSIDENT

Geoff Bawden, VE4BAW
204-295-0714
ve4baw@rac.ca

After running a series of webinars this spring on the "recent past and future of RAC", we took a well-deserved summer hiatus. By the end of June we had held four webinars inviting RAC Maple Leaf Members, RAC Affiliated Club Presidents and ARES members who are RAC members to meet via webinar with the RAC President, Regional Director and Chief Field Organization as well as other officers.

The webinars were a great success and it is my hope that a continuous cycle of webinars will become a part of RAC's corporate culture. We are currently planning and executing for our fall/winter webinars.

I want to welcome Al Masse, VE3CWP, as RAC's new Corporate Secretary. Al comes to us with a wealth of organizational skills, history and wisdom and will be a great benefit to RAC. I am looking forward to working with Al who provided the following short bio:

"I was first licensed on May 29, 1958, my 16th birthday, and I have been active for 55 years this past May. I enjoy all facets of the hobby, ranging from homebrewing, experimenting with antennas, participating in contests, chasing DX (my present count is 326 confirmed mixed category), ragchewing and so on. I operate preferably on CW, but also enjoy QSOs on SSB, RTTY and PSK31. Just recently I got involved with DMR. I am also licensed as VX9GLC as a special endorsement for 60 metres. Lastly, I operate on all bands from 160 up to and including 440 MHz. My shack is visible on QRZ.com."

I want to thank Linda Friars, VE9GLF, for serving as Acting Corporate Secretary and also to Paul Burggraaf, VO1PRB, for all his support. With Al coming on board Paul will now be able to focus on our information management issues. Paul has put together a team to both manage and rebuild our website. Everything ages and our website is no exception. RAC has established a budget and a plan for rebuilding the site. The initial work will be invisible but the results will start being visible to members in very early 2014.

The website rebuild is a component of our priority to improve communications and provide tools for clubs and Amateurs, with a view to increase the number of Amateurs, to increase RAC membership and to increase the profile of Amateur Radio in the general community and thus influence the political and regulatory environment.

RAC has a number of communication channels including RAC bulletins, the RAC website, The Canadian Amateur (print and eTCA), The RAC Report newsletter, Facebook, Twitter and now webinars. Some channels are better developed than others (I note charitably), some share information and have editorial consistency and sophistication – and other channels are under-maintained. We need all these channels to be consistent and coherent.

RAC has decided to address this communications priority by expanding its paid component to acquire someone who will manage our communications program, function as a Public Relations Officer and also raise funds for RAC. You can find more information about this position on page 9. Now don't get too excited, RAC is a modest organization with modest finances and will provide a modest stipend.

Après avoir tenu une série de webinars ce printemps pour discuter du passé récent et de l'avenir de RAC", nous nous sommes accordés une relâche estivale bien méritée. À la fin du mois de juin nous avions tenu quatre webinars avec les membres Maple Leaf de RAC, les présidents des clubs affiliés à RAC et les membres d'ARES membres de RAC leur permettant de s'entretenir, via webinar, avec le président de RAC, les directeurs régionaux et le chef de l'organisation sur le terrain (organisation extérieure) et autres responsables.

Les webinars ont connu un grand succès, à tel point que j'espère voir la mise en place d'une ronde continue de webinars devenir partie prenante de la culture corporative de RAC. Nous sommes présentement à planifier nos webinars de l'automne et de l'hiver.

Je veux souhaiter la bienvenue à Al Masse, VE3CWP, le nouveau secrétaire corporatif de RAC. Al nous arrive avec un important bagage de compétences en organisation et en histoire. Al sait faire preuve de sagesse et de prudence et sera grandement utile à RAC. J'anticipe le plaisir de travailler avec Al, qui a fourni la courte biographie qui suit :

« J'ai obtenu ma première licence le 29 mai 1958, à mon 16e anniversaire, et j'étais actif depuis 55 ans en mai dernier. J'aime toutes les facettes du hobby, que ce soit de la construction-maison, de l'expérimentation d'antennes, participation à des concours, pourchasser le DX (mon total actuel est de 326 confirmés dans la catégorie mixte), conversations en ondes, etc. J'opère préférablement en CW, mais j'apprécie aussi des QSO's en BLU, RTTY et PSK31. Tout récemment j'ai été impliqué avec le DMR. Je suis aussi licencié en tant que VX9GLC pour une autorisation spéciale sur 60 mètres. Enfin, j'opère sur toutes les bandes de 160 m. jusqu'à et incluant 440 MHz. On peut voir mon "shack" sur QRZ.com. »

Je tiens à remercier Linda Friars, VE9GLF, d'avoir agit en tant que secrétaire corporative, de même que Paul Burggraaf, VO1PRB, pour son soutien. Avec l'arrivée de Al, Paul pourra maintenant se concentrer sur les enjeux de la gestion des nos communications. Paul a mis sur pied une équipe vouée à la gestion et à la réfection de notre site web. Tout « vieillit » et notre site web ne fait pas exception. RAC s'est donné un plan et un budget pour refaire le site. Au début, le travail ne sera pas visible, mais dès le début de 2014, les membres pourront commencer à en voir les résultats.

La réfection de notre site web fait partie de notre priorité visant à améliorer nos communications, et aussi à fournir des outils aux clubs et aux amateurs dans le but de faire croître le nombre d'amateurs, d'augmenter le nombre de membres de RAC et de mieux faire connaître le radioamateurisme dans la communauté en général et, par voie de conséquence, influencer l'environnement politique et règlementaire.

RAC possède plusieurs canaux de communication dont son bulletin, son site internet, The Canadian Amateur (TCA) versions imprimé et électronique, l'info-lettre RAC en bref, Facebook, Twitter et maintenant les webinars. Certains de ces canaux sont moins développés que d'autres (je suis indulgent!). Quelques uns partagent l'information et offrent des éditoriaux consistants et bien pensés pendant que d'autres souffrent d'un manque de mise à niveau. Nous les voulons tous substantiels et cohérents.

RAC a décidé de prioriser ses communications en déboursant davantage pour obtenir les services de quelqu'un capable de gérer notre programme des communications, d'agir à titre de responsable des relations publiques et des levées de fonds pour RAC. Vous pourrez trouver plus d'informations à ce sujet à la page 9. Mais ne soyez pas trop enthousiasme, RAC est une organisation modeste, avec des moyens financiers modestes, donc qui ne pourra qu'être modeste dans ses réalisations.

RAC EXECUTIVE POSITIONS 2014-2015

In keeping with the Constitution of Radio Amateurs of Canada, each position of the RAC Executive comes due every two years with the current term ending on December 31, 2013. Your elected Board of Directors is required to elect members to the Executive positions on behalf of the members.

All positions on the Executive shall have a term of two years. A full term of office is defined as commencing on January 1 of the first year to December 31 of the second year. Any person may occupy the same office for a maximum of three consecutive terms, with a partial term not being counted as a full term. At the discretion of the Board, a person may subsequently hold a different Executive office or may return to an office previously held after a break from that office of at least one year.

A number of the current Executive members have agreed to stay on and will be seeking a second term or third term. However, each position is potentially open for any member to apply for.

The following is a list of the Executive positions involved:

- President
- First Vice-President
- Corporate Secretary
- Treasurer
- Chief Field Services Officer
- International Affairs Officer
- Regulatory Affairs Officer
- RABC Representative Officer
- Chief Information & Technology Officer
- Public Information Officer
- Customer Services Officer
- Honourary Legal Counsel

Any member of Radio Amateurs of Canada may submit their name and a brief biography for any Executive position, by contacting the RAC Corporate Secretary at: Alvin Masse, VE3CWP, 440 Maple Avenue, LaSalle, Ontario N9J 1P4. Email: ve3cwp@mnsi.net.

Nominations are now open and close on September 30. All names received will be put before the RAC Board of Directors for a vote. Please remember: Radio Amateurs of Canada belongs to each of you as members. Perhaps it is time to put a little more into the shaping and direction of the organization than just being a member. This is your opportunity to make a difference.

LES POSTES AU COMITÉ EXÉCUTIF DE RAC EN 2014-2015

En accord avec la constitution de Radio Amateurs du Canada, chaque poste à l'Exécutif de RAC a une durée de deux ans. Le terme actuel prend fin le 31 décembre 2013. Votre Conseil d'administration (Bureau des directeurs) a la tâche de combler par élections, au nom des membres, les postes de l'Exécutif

Tous les postes à l'Exécutif devront avoir une durée de deux ans. Un terme complet en poste est défini comme devant commencer le 1er janvier de la première année et se terminer le 31 décembre de la seconde année. Toute personne peut occuper le même poste jusqu'à un maximum de trois termes consécutifs, sachant qu'un terme partiel n'est pas compté comme un terme complet. À la discrétion des directeurs, une personne peut occuper immédiatement un poste différent à l'Exécutif ou revenir au même poste après une interruption d'au moins un an.

Certains membres de l'Exécutif actuel sont d'accord pour demeurer en poste et solliciteront un deuxième ou un troisième mandat. Cependant, chaque poste est ouvert à quiconque est membre et désire se présenter.

Voici la liste des postes à l'Exécutif :

- Président
- Premier vice-président
- Secrétaire corporatif
- Trésorier
- Responsable en chef des services sur le terrain (extérieurs)
- Responsable des affaires internationales
- Responsable des affaires règlementaires
- Responsable de la représentation à RABC
- Responsable en chef de l'information et de la technologie
- Responsable des relations publiques
- Responsable des services à la clientèle
- Conseiller juridique honoraire

Tout membre de Radio Amateurs du Canada peut soumettre son nom et une brève biographie pour occuper un poste à l'Exécutif. Il suffit de communiquer avec le secrétaire corporatif de RAC à : Alvin Masse, VE3CWP, 440 Maple Avenue, LaSalle, ON N9J 1P4. Email : ve3cwp@mnsi.net.

La période des nominations est actuellement ouverte jusqu'au 30 septembre. Tous les noms reçus seront communiqués au Conseil d'administration (Bureau des directeurs) pour être soumis au vote. À vous rappeler : Radio Amateurs du Canada vous appartient en tant que membres. Peut-être le temps est-il venu de mettre un peu plus d'effort au niveau de la structure et de la direction de l'organisation plutôt que de simplement en être membre. Voici votre chance de le démontrer!

On another note, RAC is once again working with Industry Canada to prepare for a World Radio Conference (WRC-15) in 2015. Flushed with success from WRC-12 we are proceeding down the road for an international 60 metre allocation. We have already commented positively (naturally) on the government's recent consultation on amending the Canadian Table of Frequency Allocations to include the newly agreed upon 472 kHz agreed upon at WRC-12. Yes, I am frustrated that as of this writing we haven't yet received our domestic 60 metre allocation but our international activities with respect to WRC-15 supports our domestic position.

I hope that the summer treated you well and look forward to meeting with you via webinar this fall.

Geoff Bawden, VE4BAW – RAC President and Chair

Autre point, RAC travaille de nouveau avec Industrie Canada à la préparation de la World Radio Conference (WRC-15) de 2015. Pleinement satisfait du succès de WRC-12, nous nous préparons à l'arrivée du 60 mètres à l'échelle internationale. Nous avons déjà signifié positivement notre accord (naturellement) lors de la récente consultation du gouvernement sur les amendements à apporter à la table canadienne d'allocations des fréquences pour y inclure le nouveau 472 kHz accepté à la WRC-12. Oui, je suis déçu qu'au moment d'écrire ces lignes, nous n'ayons pas encore reçu confirmation de l'allocation de notre propre 60 mètres, mais notre action au niveau international dans le cadre de la WRC-15 milite en faveur de notre position.

J'espère que vous passez un bel été et que nous aurons le plaisir de vous rencontrer cet automne via notre webinar.

Geoff Bawden, VE4BAW – RAC Président-directeur général

– Traduction par Claude Lalande, VE2LCF

INDUSTRY CANADA RELEASES A RADIO STANDARDS SPECIFICATION (RSS) FOR MEDICAL DEVICES OPERATING IN THE BAND 413-457 MHz

Norm Rashleigh, VE3LC
RAC Representative to the
Radio Advisory Board of Canada

In the May-June 2012 issue of TCA, I wrote an article entitled “FCC Authorizes 70 cm Spectrum for Implanted Medical Devices”. I mentioned in the article that Industry Canada was studying the developments in the United States and may be coming out with a new Radio Standards Specification (RSS) document covering the minimum requirements for the certification of transmitters and receivers used in radiocommunications systems which are part of Medical Micro-Power Networks (MMNs). This, of course, is necessary as a matter of regulation in order these devices can be marketed and used in the Canada. As I explained in the original article last year, this MMN technology uses implanted wireless devices along with an external body-worn controller to provide therapy for patients suffering damaged nervous system pathways and paralysis.

On June 14, 2013, Industry Canada issued “RSS-244 – Medical Devices Operating in the Band 413-457 MHz”. Implicit with issuing an RSS document for these devices, Industry Canada is also authorizing the radio spectrum space for use by these Medical Devices in the same band as in the United States, specifically four 6 MHz channels: 413-419 MHz, 426-432 MHz, 438-444 MHz and 451-457 MHz. As such, these devices will share the same spectrum as land mobile and fixed services as well as the Canadian 70 cm amateur band between 430 to 450 MHz. This spectrum was chosen for its good propagation characteristics within the human body.

Although not specifically stated, we believe the MMN technology uses a direct sequence spread spectrum transmission technique that may occupy the entire spectrum envelope of one of the specified 6 MHz channels at a time. These devices are necessarily Ultra-Low-Power technology for battery conservation and utilize a very short transmit duty cycle. According to RSS-244, the peak allowable EIRP of the transmitted signal shall not exceed 800 microwatts per MHz in any 1 MHz of the allowable allocations. This amounts to 800 nanowatts per 1 kHz bandwidth or approximately –31 dBm. It is therefore possible the use of these devices could cause a bursty desensitizing interference to existing radio services sharing the frequency band, at least at very close range to receivers. This, however, is difficult to determine with certainty due to the lack of a full understanding of the proprietary transmission protocol.

The transmission technology is purported to have a good tolerance to the potential of external interference. Indeed, we understand the workings of these systems employ a cognitive interference mitigation strategy that senses strong in-band interference and is agile enough to change the entire 6 MHz channel allocation to another, if required. Besides the outbound interference potential of this new technology, we are also concerned that very strong in-band transmissions at close range from two-way portable radios – such as used by the Public Safety or Amateur Radio services – may cause a complete shutdown of the medical-radio system resulting in negative consequences to the person implanted with MMN devices. This may be of particular concern to a paramedic using a UHF portable radio while attending to a patient.

A draft of RSS-244 was presented a year ago by Industry Canada to the Radio Advisory Board of Canada (RABC) of which Radio Amateurs of Canada is a member. The draft document was reviewed by the RABC ElectroMagnetic Compatibility Committee which I chair. Other than the details provided by Industry Canada and those gleaned from the US Notice of Proposed Rule Making (NPRM) on the subject and other public information on the Internet, we were unable to obtain definitive knowledge or expertise on this technology to seek authoritative and unbiased comment.

Besides RAC, other RABC members, including representatives from the Police and EMS services, expressed concern about operating their UHF portable radios in close proximity to a person with MMN devices. Besides the potential of harm to the person, such interference may cause issues of liability and bad publicity. There were similar concerns raised by the American Radio Relay League in their submission to the Federal Communications Commission in response to the NPRM in the States. Our concerns were communicated to Industry Canada collectively by official correspondence from the RABC.

Notwithstanding, Industry Canada has now released RSS-244 governing the use of these unlicensed radio devices in Canada. This is a prerequisite to any further requisite approvals for these medical devices by Health Canada. The US Federal Drug Administration has already approved MMN devices in the States for human therapy.

It is worthy of note that RSS-244 specifies the requirement in User Manual that says:

The user manuals for all transmitters covered by this standard shall contain the following statement in a conspicuous location:

“This device may not interfere with stations that are authorized to operate on a primary basis in the bands 413-419 MHz, 426-432 MHz, 438-444 MHz and 451-457 MHz, and it must accept any interference received, including interference that may cause undesired operation.”

According to the Canadian Table of Frequency Allocations, excluding the 70 cm Amateur band, those services having primary status include Fixed and Mobile operations. In the 430-450 MHz range, the primary service is Radiolocation and the Amateur Service is secondary.

Although RSS-244 is now in effect, there is a 120-day period from the June 15 release date in which the public are invited to comment. Radio Amateurs of Canada has already responded independently to this Gazette Notice on behalf of the Amateur Service in Canada.

References:

Gazette Notice SMSE-001-13 – http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10633.html

RSS-244 – http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10632.html

US Federal Register – http://www.gpo.gov/fdsys/pkg/FR-2012-01-27/pdf/2012-1540.pdf

ARRL Newsletter – http://www.arrl.org/news/fcc-grants-secondary-service-allocation-to-wireless-broadband-medical-micropower-networks

Radio Advisor Board of Canada – http://www.rabc-cccr.ca/home.cfm

Canadian Table of Frequency Allocations http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/cane2009edition-eng.pdf/$FILE/cane2009edition-eng.pdf

WE NEED YOUR HELP!

DEPUTY DIRECTOR

The position of Deputy Director was approved by the membership at the Halifax AGM in 2010 and subsequently approved by the federal government in February 2011. The Deputy Director position provides for continuity of organization and greater access by members. The Deputy differs form the position of Assistant Director in that the incumbent fullfills the duties of Director when the Director is not available and serves as an observer at Board meetings.

Please express your interest to the RAC President Geoff Bawden, VE4BAW, at: ve4baw@rac.ca

REGULATORY AFFAIRS OFFICER

The Radio Amateurs of Canada is seeking an organized, knowledgeable and diplomatic individual to undertake the role of Regulatory Affairs Officer. This is a senior executive level position reporting to the President. The position has a key role in managing our relationship with Industry Canada. This includes monitoring and analyzing Industry Canada initiatives, generating policy options and advising Industry Canada of RAC's position on issues of importance to our members.

The core competencies for this position include: the ability to work effectively in a team environment; the ability to generate options and problem solve at a strategic level; and the ability to work successfully with government, our members and third parties in creating successful outcomes in a complex environment.

For further information or to apply contact the President at ve4baw@rac.ca with a copy to the RAC Office Manager at: racgm@rac.ca

TREASURER

The Radio Amateurs of Canada is looking for a Treasurer who is a Chartered Accountant, Certified General Accountant or Certified Management Accountant.

A certification in Amateur Radio is optional. As RAC's financial advisor, we need someone to provide direction on the accounts and act as liaison with the external auditors. Experience with QuickBooks would be an asset.

Please speak with your friends, there must be a RAC member who either qualifies or can approach someone for this volunteer position. Certification in Amateur Radio is not a requirement for this position. Interested parties please contact the RAC Corporate Secretary Al Masse, VE3CWP at: ve3cwp@mnsi.net

RAC PUBLIC INFORMATION OFFICER

The Radio Amateurs of Canada is seeking the services of a Public Information Officer (PIO). This is a voluntary position operating at the national level.

Candidates with the following knowledge, skills and abilities will be considered:

- Knowledge of the principles and methods of planning and conducting a public information program.
- Knowledge of the media used in public relations.
- Ability to plan and conduct a public information program.
- Ability to write and edit various forms of promotional and informational material and to develop and/or select other types of media such as films and exhibits.
- Ability to discern and collect newsworthy materials, to analyze and evaluate public relations media and methods, and to judge probable public reaction.
- Ability to speak effectively in public.
- Ability to work effectively with RAC Affiliated Clubs and the RAC national Bulletin Service.

Interested parties please contact the RAC Corporate Secretary at: ve3cwp@mnsi.net

Al Masse, VE3CWP – RAC Corporate Secretary

NEW JOB POSTING:

DIRECTOR OF COMMUNICATION AND FUNDRAISING

This is a paid position within the Radio Amateurs of Canada.

Responsible for the production and management of all lines of public communication to RAC members and the general public, responsible for RAC fundraising and serves as backup to the RAC Office Manager:

1) Ensures congruity and consistency among all lines of communication, both written and electronic including:

RAC bulletins, The Canadian Amateur (print and eTCA), the RAC website and The RAC Report newsletter

2) Writes and edits articles

3) Manages and edits media releases

4) Manages official language translations of RAC publications

5) Manages media relations

6) Provides coordination to all Public Information Officers within the RAC Field Organization

7) Raises funds from RAC members, members of the public and all levels of government

Core competencies:

- Ability to work well with others
- Ability to communicate effectively, both orally and in writing, in both official languages
- Ability to work independently
- Ability to write and edit in both official languages
- Ability to manage small working groups
- Ability to influence others

Salary: Modest

Reporting: the RAC office reports to the RAC President and this position is one of the positions within the RAC office.

Applications: All applications should be sent in writing to the RAC office to:

Radio Amateurs of Canada
720 Belfast Road, Suite 217
Ottawa, ON K1G 0Z5

Email applications will be accepted at racgm@rac.ca.

Closing date: October 31, 2013

AROUND THE CORNER...

People, Places, News and Events on the Canadian Amateur Radio Scene

The following news items have been compiled from Industry Canada, RAC bulletins and the RAC website at <www.rac.ca>. To subscribe to RAC bulletins visit <http://rac.eton.ca/racbullemail.htm>. Thanks to RAC Bulletin Editor – Vernon Ikeda, VE2MBS/VE2QQ. Traduction par Serge Langlois, VE2AWR.

PROPOSED REVISIONS TO THE CANADIAN TABLE OF FREQUENCY ALLOCATIONS, SMSE-004-13

This Bulletin is issued to bring to the attention of the Canadian Amateur Radio Community the release Gazette Notice SMSE-004-13 by Industry Canada advising about the Consultation on Proposed Revisions to the Canadian Table of Frequency Allocations. Such revisions to the domestic table are expected following a World Radio Conference (WRC).

Of interest to Canadian Amateurs in the proposed revisions is the inclusion of the new International Amateur MF band between 472 and 479 kHz. This 600 metre band was long sought and won at the WRC-12 in large part by the good and dedicated efforts of the Canadian Delegation including representatives from Radio Amateurs of Canada, Dr. Kenneth Pulfer, VE3PU (SK) and Bryan Rawlings, VE3QN. RAC is very pleased to have been successful in Geneva.

RAC officials also noted the proposed revisions in the Table did not include the addition of an appropriate Canadian Footnote for the range 5230 to 5240 kHz for authorization of the Amateur Service on 60 metre spot frequency channels as petitioned by RAC in 2010 and the subject of the Industry Canada Proposal and Consultation SMSE-10-12 issued last year in May 2012. This is an omission and should not mean an unfavourable decision on the 5 MHz channels. Instead, from all indications, there is good reason to believe the 60 Metre Decision will be favourable to Canadian Radio Amateurs and is imminent.

Canada Gazette notice SMSE-004-13 also invites public comments on the proposed revisions contained in this consultation paper. Following the review of comments by the Department, the allocation decisions will be promulgated by the issuance of a revised edition of the Canadian Table. The public response period ends September 27, 2013.

Radio Amateurs of Canada will be responding directly to this Consultation and through its membership in the Radio Advisory Board of Canada to the recent Consultation ensuring the interests of the Canadian Amateur Community are well represented on this Consultation. If you chose to comment to IC please copy RAC as we would be interested in your views.

Industry Canada references:

Gazette Notice SMSE-004-13
http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10655.html

Gazette Notice SMSE-010-12
http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10380.html

Industry Canada – What's New?
http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10580.html

Ian Macfarquhar, VE9IM (ve9im@rac.ca)
RAC First Vice-President and Regulatory Affairs Officer (with thanks to Norm Rashleigh, VE3LC, RAC representative to the Radio Advisory Board of Canada)

RÉVISIONS PROPOSÉES POUR LA TABLE D'ALLOCATIONS DE FRÉQUENCES CANADIENNE, SMSE-004-13

Ce bulletin est émis pour porter à l'attention de la communauté radio amateur canadienne l'avis SMSE-004-13 de la Gazette publié par Industrie Canada informant de la consultation au sujet des révisions proposées de la table d'allocations des fréquences canadiennes. De telles révisions à la table domestique sont prévues à la suite d'une conférence mondiale sur la radio (CMR).

D'intérêt pour les radioamateurs canadiens dans les révisions proposées est l'inclusion de la nouvelle bande radio amateur MF internationale entre 472 et 479 kHz. La bande de 600 mètres a longtemps été désirée et gagnée à la CMR 2012, en grande partie par les bons et dévoués efforts de la délégation canadienne incluant des représentants de Radio Amateurs du Canada, le Dr. Kenneth Pulfer, VE3PU (SK), et Bryan Rawlings, VE3QN. RAC est très heureux d'avoir eu du succès à Genève.

Les représentants de RAC ont aussi noté que les révisions proposées dans la table n'incluent pas l'addition de l'annotation canadienne appropriée pour la gamme 5230 à 5240 kHz pour l'autorisation générale du service radio amateur sur des canaux de fréquences fixes sur 60 mètres, telles que demandé par RAC en 2010 et le sujet de l'avis de consultation SMSE-10-12 émis l'an dernier en mai 2012. Ceci est une omission, et ne devrait pas être interprété comme une décision défavorable sur les canaux de 5 MHz. Plutôt, selon toutes indications, il existe de bonnes raisons de croire que la décision sur 60 mètres sera favorable aux radioamateurs canadiens et est imminente.

L'avis de la Gazette du Canada SMSE-004-13 sollicite aussi les commentaires du public au sujet des révisions proposées dans ce document de consultation. Suite à l'examen des commentaires reçus par le Département, les décisions d'allocation seront promulguées par la publication d'une édition révisée de la table de fréquences canadienne. La période de réponse du public se termine le 27 septembre 2013.

Radio Amateurs du Canada répondra directement à cette consultation et par sa participation au Conseil consultatif canadien de la radio, pour s'assurer que les intérêts de la communauté radio amateur canadienne soient bien représentés dans cette consultation. Si vous choisissez de faire des commentaires à I.C. s.v.p. mettre RAC en copie car nous serions intéressés par vos opinions.

Références pour Industrie Canada :

Avis de la Gazette SMSE-004-13
http://www.ic.gc.ca/eic/site/smt-gst.nsf/fra/sf10655.html

Avis de la Gazette SMSE-010-12
http://www.ic.gc.ca/eic/site/smt-gst.nsf/fra/sf10380.html

Industrie Canada – Quoi de neuf?
http://www.ic.gc.ca/eic/site/smt-gst.nsf/fra/sf10580.html

Ian Macfarquhar, VE9IM (ve9im@rac.ca)
Premier vice-président et responsable des affaires réglementaires Radio Amateurs du Canada [Avec remerciements à Norm Rashleigh, VE3LC – Représentant de RAC au Conseil consultatif canadien de la radio (CCCR)]

NEW RAC CORPORATE SECRETARY
Alvin (Al) M. Masse, VE3CWP

I want to welcome Alvin Masse, VE3CWP, as RAC's new Corporate Secretary. Al comes to us with a wealth of organizational skills, history and wisdom and will be a great benefit to RAC. I am looking forward to working with Al. You can find out more information about Al in the short bio he provided below.

I want to thank Linda Friars, VE9GLF, for serving as Acting Corporate Secretary and also Paul Burggraaf, VO1PRB, for all his support.

Geoff Bawden, VE4BAW
President and Chair RAC

NOUVEAU SECRÉTAIRE CORPORATIF DE RAC
Alvin (Al) M. Masse, VE3CWP

Je désire accueillir Al Masse, VE3CWP, en tant que le nouveau secrétaire corporatif de RAC. Al nous arrive avec une profusion de compétences organisationnelles, de vécu et de sagesse, et il sera un gros atout pour RAC. Je suis impatient de pouvoir travailler avec Al. Vous pouvez trouver plus d'information à propos de Al dans la courte biographie qu'il a soumise ci-après.

Je veux remercier Linda Friars, VE9GLF, pour avoir agi en tant que secrétaire corporative par intérim et également Paul Burggraaf, VO1PRB, pour tout son appui.

Geoff Bawden, VE4BAW
Président, Radio Amateurs du Canada

EXPLORING WINDOW TRANSMISSION LINES
(Part 2 of 3)

David Conn, VE3KL
24 Terrace Drive
Ottawa, ON K2H 9N2
E: davidrconn@rogers.com

INTRODUCTION

In Part 1 of this series (May-June 2013 TCA), the basic properties of window type transmission lines was presented. In particular, the losses and other characteristics of Wireman 551 400 Ohm window line were studied in both dry and wet conditions. The line was also compared to high quality LMR 400 50 Ohm coaxial cable.

In this article, the basic characteristics of window and coaxial transmission lines are applied to the G5RV antenna (see TCA hotlink 1).

The G5RV is used as an example because it is one of the most popular antennas used over many years in the HF bands. It was invented by Louis Varney, G5RV, in 1946 and is still being used today by many Amateurs.

This antenna uses a 3/2-wavelength centre-fed doublet at the 20 metre band as its radiating element and is fed by cascading a length of window line with a section of coaxial cable (see Figure 1).

The challenge in taming the G5RV is to understand the impact of high SWR levels on the window and coaxial transmission lines. This is not an issue in the 20 metre band where the antenna is resonant by design. The antenna impedance is approximately 110 Ohms. This impedance is also presented to the coaxial cable as described by G5RV through the use of a "make up section" which is one-half wavelength long at 14.15 MHz for the full-sized G5RV antenna used in this article.

The SWR at 14.15 MHz on the 400 Ohm window line is approximately 3.3 while the SWR on the coaxial cable is approximately 2.2. These SWR levels are easily handled with a fairly simple antenna tuner for good results.

As shown in Figure 1, a section of 50 Ohm coaxial cable is used to connect the transceiver to the window line via a 1:1 Balun.

This is the normal way that the G5RV is used. However, if the antenna tuner is located at the Balun end of the coaxial cable, the performance of the antenna is much improved.

In this article, I calculate the losses associated with the window line and coaxial cable. All other losses are ignored to give a baseline for the expected performance of the antenna. These extra losses are associated with the antenna tuner, imperfect reflections from the transceiver, the Balun and the antenna efficiency which is quite high.

THE SYSTEM ANALYSIS

The process used in this study is the following:

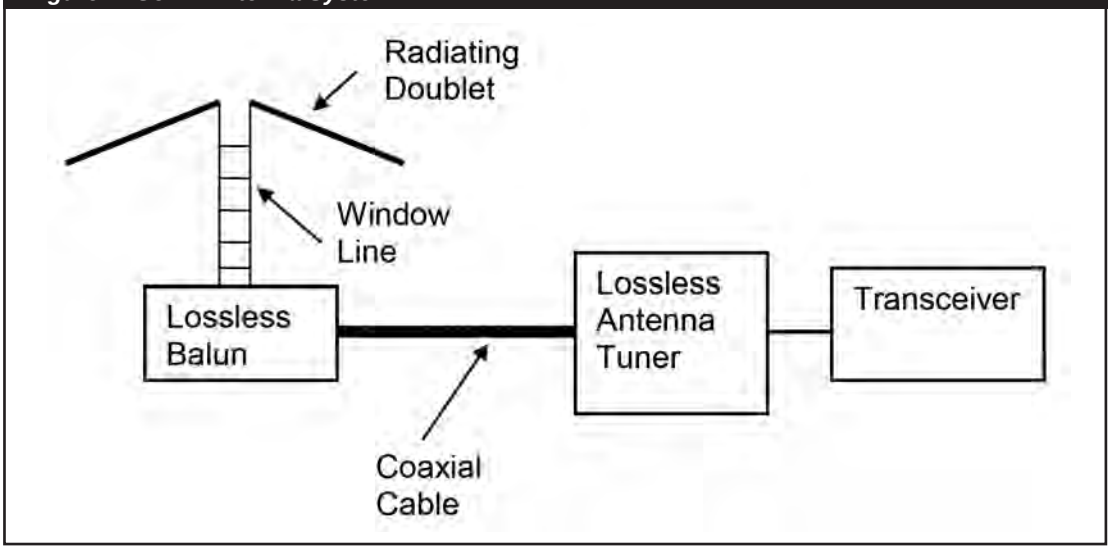
- Simulate the antenna input impedance using EZNEC.
- Use SimSmith (see TCA hotlink 2) to calculate the power delivered to the antenna using the G5RV antenna. Losses in the window line and the coaxial cable are included in the analysis. SimSmith by AE6TL is a Smith chart program that can include cascaded transmission lines and other standard components. It uses the transmission models from TLDetails (see TCA hotlink 3) and can import data directly from EZNEC and 4nec2 antenna modelling programs.
- Plot and interpret the results from SimSmith.

Antenna Model

The G5RV antenna modelled in the study is shown in Figure 2 on the next page. It is set up as a standard inverted V as shown with its length adjusted to resonate at 14.15 MHz (centre of the 20 metre band).

The model assumes average ground and copper loss. The height of the centre portion of the antenna is 10 metres and the ends are at a height of 4.66 metres. The resonant impedance is close to 110 Ohms as expected from a 3/2 λ doublet. Hence the antenna is easily matched in the 20 metre band.

Figure 1: G5RV Antenna System



The Feedlines

Several cases are studied. These are:

- Wireman 551 Window Line (dry) followed by 15.24 metres of RG-213
- Wireman 551 Window Line (ice/snow) followed by 15.24 metres of RG-213
- Wireman 551 Window Line (dry) followed by 15.24 metres of RG-58U
- Wireman 551 Window Line (ice/snow) followed by 15.24 metres of RG58U

The length of the Wireman 551 was adjusted to be λ/2 at approximately 14.15 MHz for all cases.

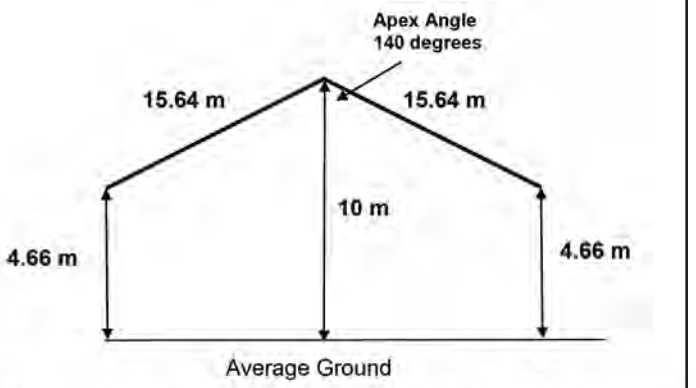
The feedline consists of a λ/2 "make up" section of Wireman 551 window line, a Balun, 15.24 metres of coaxial cable such as RG-213, RG-8X or RG-58 and then an antenna tuner. The term "make up" follows the description used by Louis Varney to emphasize that the window line is not a matching transformer. It simply transfers the antenna impedance from the antenna to the Balun at 14.15 MHz since it is one-half wavelength long at 14.15 MHz.

Results

Before presenting the results, please note that these results represent the best case analysis since antenna tuner losses and imperfect reflections from the transceiver are ignored.

Both of the above can have a dramatic impact on the system losses. This antenna should be used with the very best antenna tuner that you can build or afford. You cannot do much about your transceiver except the possibility of using a very high output impedance of some tube type transmitters.

Figure 2: G5RV Antenna Inverted V Dimensions

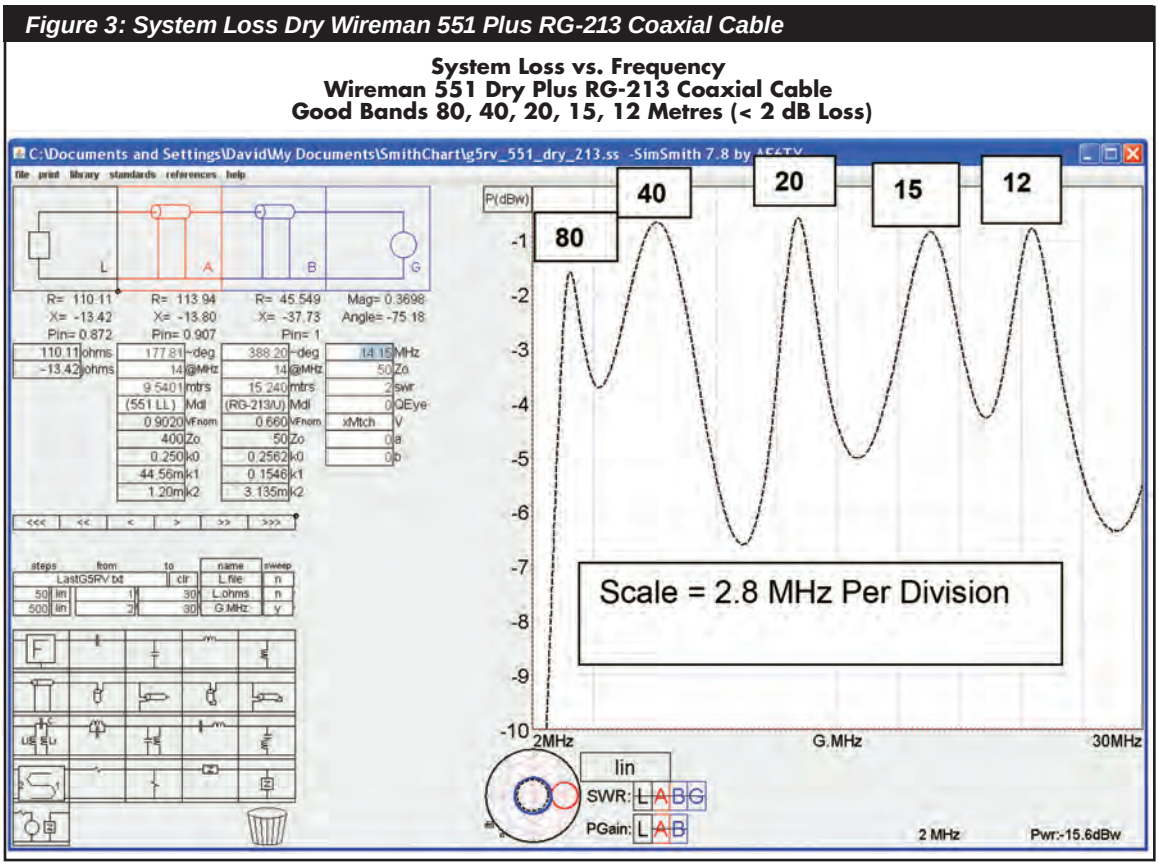


Another important parameter is the SWR of the antennas. If the SWR is greater than 3:1, problems can and will occur with the antenna tuner such as extremely high loss and arcing in the capacitors. One graph of the SWR is shown later in this article.

Losses in Dry Wireman 551 and RG-213 Coaxial Cable

The results of this analysis are presented in Figure 3 which shows the system loss plotted against frequency over the range of 2 to 30 MHz. The peaks (lowest loss) show that the 80, 40, 20, 15 and 12 metre bands have a loss of less than 2 dB and all other bands, especially 30 metres, have high losses and are deemed to provide poor performance with respect to losses. Note that the 160 metre band performance is right off the scale with very high losses and the losses in the 10 metre band are greater than 6 dB.

Figure 3: System Loss Dry Wireman 551 Plus RG-213 Coaxial Cable



Losses in Ice/Snow covered Wireman 551 and RG-213 Coaxial Cable

It was shown in Part 1 of this series that ice/snow covered window line can have extremely high losses (especially at high frequencies).

The results of the analysis for ice/snow snow covered Window line are presented in Figure 4 on the next page.

The results show that there is definitely a degradation with respect to the dry conditions but the antenna system is still quite useable.

The reason for the small degradation is due to the fairly short section of Window line and the use of the system below 30 MHz where line losses in ice/snow covered lines is not extreme.

Losses in Dry Wireman 551 and RG-58U higher loss Coaxial Cable

Figure 5 shows the system loss for dry Wireman 551 connected to RG-58 coaxial cable. This system meets the 2 dB criteria for good performance in 80, 40, 20, 15 and 12 metre bands, but gets considerably worse in the poor bands, especially 30 metres.

Losses in Ice/Snow covered Wireman 551 and RG-58U Coaxial Cable

As expected, this is the worst case where ice/snow covered Wireman 551 is combined with a relatively high loss coaxial cable, RG-58U. The only band (see Figure 6 on page 14) that meets a 2 dB loss specification is 20 metres. Once again, the loss in the 30 metre band is even worse than before.

Standing Wave Ratio with Dry Wireman 551 and RG-213 Coaxial Cable

The input Standing Wave Ratio (SWR) that the antenna tuner sees is shown in Figure 7 on page 14. Here the SWR is less than 3:1 for 80, 40, 20, 15 and 12 metres, but notice how quickly the SWR changes with frequency. As expected, the SWR at 160 and 10 metres is very high making the system very difficult to work with in those bands.

CONCLUSIONS AND DISCUSSION

This article presented an example, G5RV, of the use of window line for feeding antennas and also introduced a very simple but powerful software package, SimSmith, for analyzing cascaded transmission lines. It produces Smith Chart plots as well as loss graphs for the entire system.

The process studied in this article presented the best case analysis and did not include antenna tuner losses, Balun losses, non-ideal reflections for the transmitter and antenna efficiency. Antenna tuner losses can easily approach 3 dB for high SWR conditions while Balun losses are usually smaller. Some antennas such as very short verticals can have a low radiation efficiency and hence high losses as well.

Figure 4: System Loss Wet Wireman 551 Plus RG-213 Coaxial Cable

System Loss vs Frequency
Wireman 551 Ice/Snow Plus RG-213 Coaxial Cable
Good Bands: 80, 40, 20 metres (< 2 dB Loss)

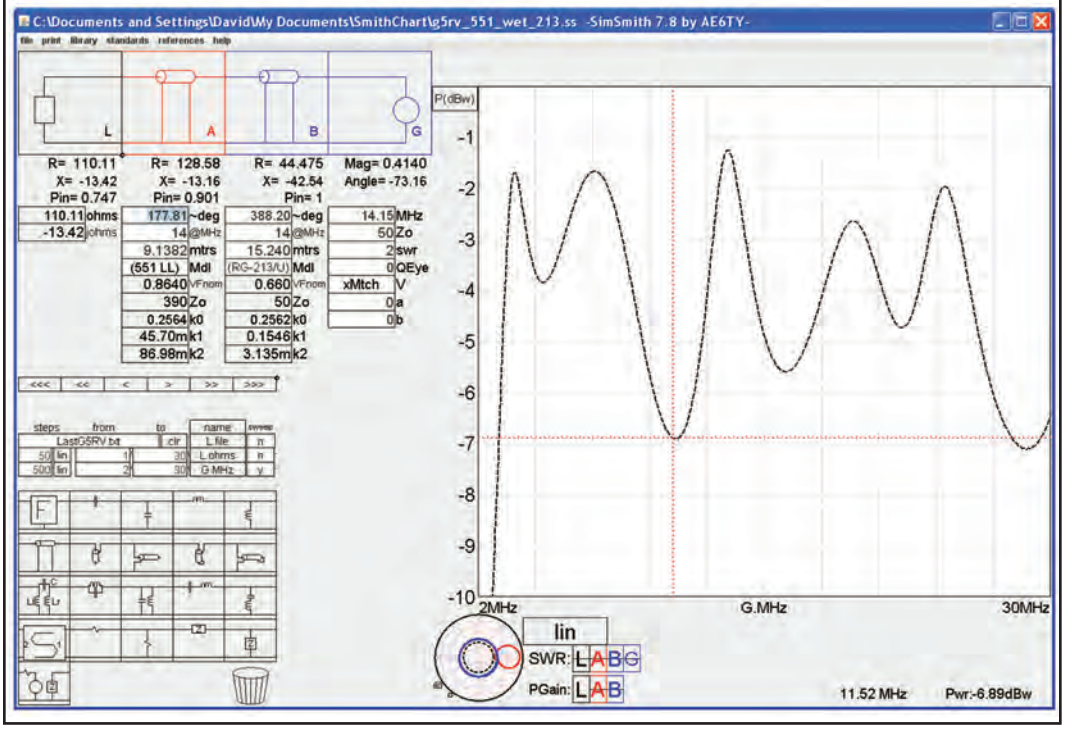
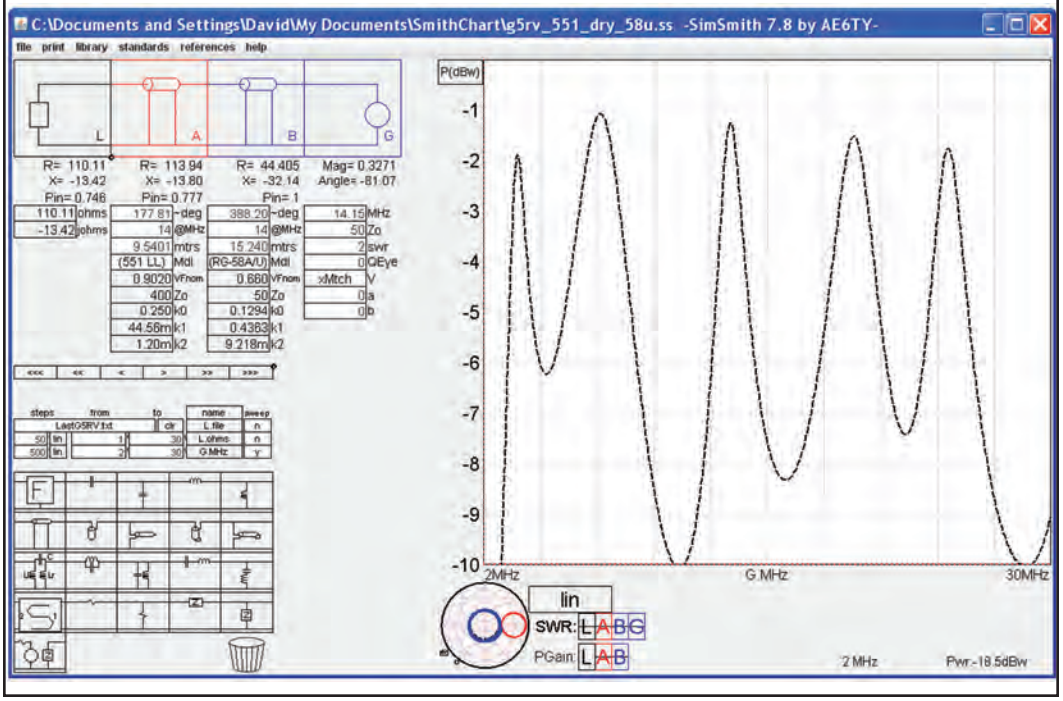


Figure 5: System Loss Dry Wireman 551 Plus RG-58 Coaxial Cable

System Loss vs Frequency
Wireman 551 Dry Plus RG-58U Coaxial Cable
Good Bands: 80, 40, 20, 15, 12 metres (< 2 dB Loss)



Part 3 of this series presents the design of a set of dipole antennas that use Wireman 551 window line as a radiating element. These antennas are considerably shorter than a full-sized dipole making them useful for portable applications including Field Day and for use in restricted areas. They can also be used together on a single mast for multiband operation.

Figure 6: System Loss Wet Wireman 551 Plus RG-58 Coaxial Cable

System Loss vs Frequency
Wireman 551 Ice/Snow Plus RG-58U Coaxial Cable
Good Bands 20 metres (< 2 dB Loss)
80 and 40 marginal

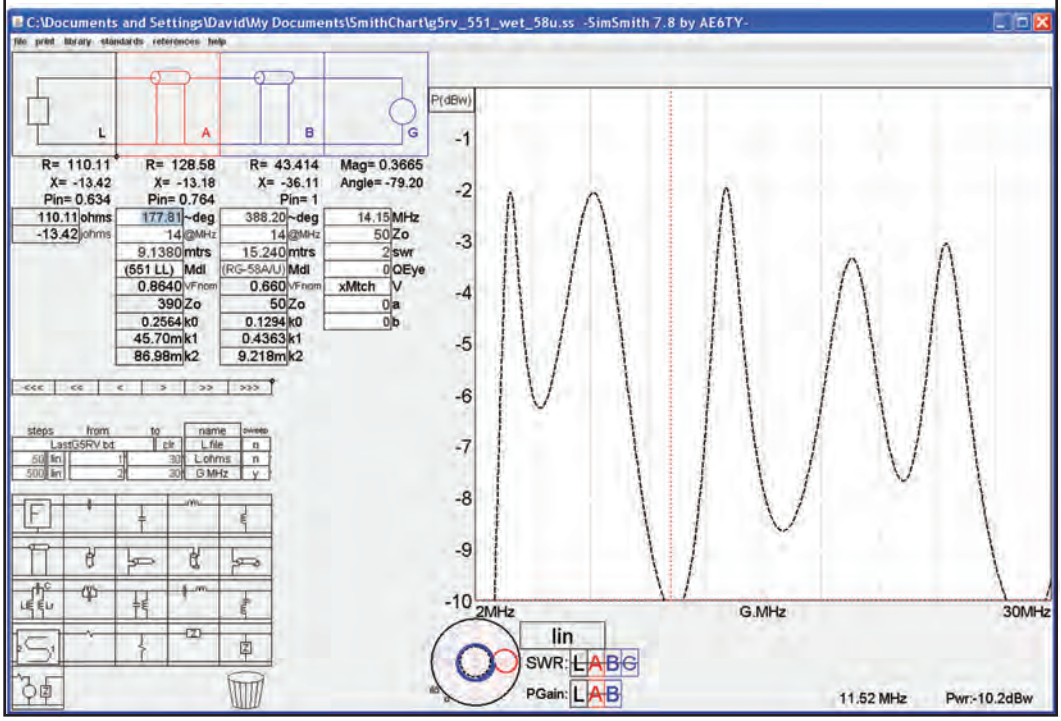
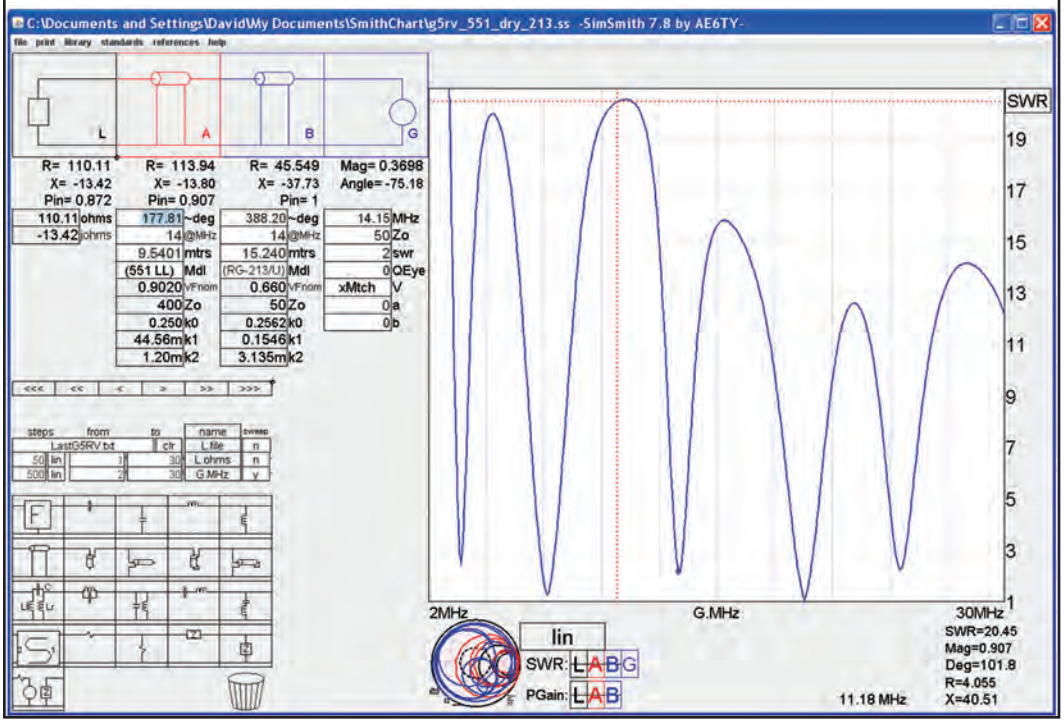


Figure 7: SWR Dry Wireman 551 Plus RG-213 Coaxial Cable

SWR
Wireman 551 Plus RG-213 Coaxial Cable



FURTHER STUDY USING TCA HOTLINKS

Further information is provided with TCA hotlinks which are easily accessed via the RAC website.

For this information, please visit http:// www.rac.ca/tca.

Hotlinks make it unnecessary to type URL addresses into your computer and provide you with calculators and other support that demonstrates the ideas presented in the articles.

The following hotlinks for this article are available on the RAC website.

TCA hotlink 1: Louis Varney, G5RV – http://www.youtube.com/watch?v=4-6Gq5Od6m4

TCA hotlink 2: SimSmith, AE6TY http://www.ae6ty.com/Smith_Charts.html

TCA hotlink 3: TLDetails, AC6LA http://www.ac6la.com

– Until later, David, VE3KL

PLEASE SUPPORT OUR ADVERTISERS!

We would like to take this opportunity to thank our amazing advertisers for their continued support of *The Canadian Amateur* magazine, Radio Amateurs of Canada – and, of course, Amateur Radio in Canada and internationally.

Many of our advertisers have supported TCA for over 10 years!

Please let them know how much you appreciate their contributions by purchasing their products and services –and please tell that you have seen their ads in TCA!

Dirk Moraal, VY1NM
Box 75
Tagish, YT Y0B 1T0

RANDOM THOUGHTS

– THE DEMPSTER HIGHWAY

Possibly the most northerly highway in Canada snakes its way north from the Dempster Turnoff, at a point some 40 kilometres east of Dawson City, Yukon to Inuvik, Northwest Territories (NWT) for 737 kilometres of the worst driving you may ever find – a road known for eating tires, coating your vehicle with black concrete like muck and sometimes known for shaking your RV to pieces amid some of the most spectacular northern scenery you could possibly want to see.

405½ kilometres up this highway, a bit of a misnomer, we cross the Arctic Circle and that alone is good reason to travel this way.

Between there and the NWT border, if we stop long enough to let our minds wander, we can populate the seemingly boundless treeless tundra landscape with herds of mammoth, Saiga antelope and giant deer. But above all, we see mammoths.

The mind's eye sees predators here too. The ferocious short faced bear, the dire wolf, and the sabre tooth cat are on the prowl as they did for thousands of years before the end of the last Ice Age.

And maybe, just maybe, we might conjure up another predator, weak and furless, carrying stone tipped spears, also hunting.

There is a small rest stop at the Arctic Circle, at 66 degrees 33 minutes North latitude, 136 degrees 18 minutes West longitude, where the outhouses have to be tied down with cables, so ferocious are the winds. Global warming has made the knee-high willows of 20 years ago grow tall enough that they offer a bit of shelter, not much, so mostly they just block the view. Between here and the border, along the west flank of the Richardson Mountains, the tundra landscape sets up no obstacles for the wind.

Propagation gets worse the farther north you go for we are well into the Auroral zone. And this is HF and Sat Phone country, as there are no cell towers, no repeaters, and 2m is mostly only useful line of sight. But things will change in the future is my guess. The Arctic Circle is a challenging destination for adventurous Amateurs. One must come prepared for there is only one fuel stop between the Dempster Turnoff in the Yukon and Fort McPherson in the NWT, a distant 550 kilometres from the start of the road and 145 kilometres beyond the Arctic Circle

Some 369 kilometres up the road there is a lonely truck stop and you are on your own for all those kilometres until you get there. Eagle Plains is well documented in travel brochures and is almost a small village in itself so you will have plenty of help if it is needed.

Operating from the Arctic Circle has its own special requirements. You do not want to travel during high winds, as they can overturn tall RVs and even unhinge a car door. Obviously your antenna will not be deployed in such conditions. My own choices would be mobile HF with the ATAS-120 antenna made by Yaesu – which has proven to be capable of intercontinental QSOs when the Grey Line is in the right place – and a light inverted V hoisted aloft with one of those dandy extendable 10 metre fibreglass poles, which if you ask me are really Japanese fishing poles for use in crowded conditions, like when fishing from a bridge. These poles retract very quickly and compactly to about a metre in length so if the wind picks up, or any rare lightning activity occurs, you can bring them down fast.

With a dipole you could also run an amplifier. Since most RVs have dual battery setups, you will not end up with a dead battery in the vehicle if you happen to get very busy on the radio. You will be in a good position to make over-the-pole QSOs with interesting prefixes, as long as the propagation lasts.

I would suggest bringing some method of checking the Grey Line, as from May to August you will be above it and it may help to visualize what direction you want to focus on. Twenty-four hours of sunlight will keep you awake anyway so you might as well put all that good insomnia to use.

When you are tired of the Arctic Circle and operating /VY1, you can drive up the road the 60 odd kilometres to the NWT border and try your hand at being /VE8. The same conditions prevail, only now you are on the other side of the Richardson Mountains. It seems to be tougher to talk from there than from west of the Richardson Mountains, but that is just my perception. If you like to hike and operate /P, the mountain tops are closer here as you are in a high pass. If it is sunny you will have a grand view from the top. After that for a stretch, the highway in the NWT is smoother and undergoing reconstruction. Soon they will have graded all the adventure out of it.

Once past Fort McPherson on the Peel River you enter the flat lands of the huge McKenzie Delta, the river the locals call the Deh Cho. I have never tried my hand at hamming from that part of the world, but local Amateurs have told me it is a challenge most of the time. After crossing the McKenzie River, where fortunately you can make use of another government ferry, the last tiresome kilometres of highway resemble Prairie flatlands, albeit with lots of small spruce trees and willow bushes, but you would recognize the coulees.

A short distance before arriving in Inuvik there is a nice pay campground called Juk Park; quiet and with great showers and it is fortuitously situated on a little hill. At this campground there is a 30-foot wooden lookout tower you can walk up. I have always wanted to set up a short mast and an antenna on top and make some calls. When I first visited it the scenery was quite extensive, but on my last trip I could only remark on how the vegetation obscures the view. It will not affect radio propagation however, and if you can get permission and overcome 24-hour daytime conditions, you may be surprised at what you can log.

One can only wonder what life would have been like 10,000 years ago or more, if cave men had owned HTs.

— NOTICE —

RADIO AMATEURS OF CANADA INC.

The Radio Amateurs of Canada is pleased to hold its Annual General Meeting (AGM) in Ancaster (Hamilton), Ontario. The AGM event will be hosted by the Hamilton Amateur Radio Club (HARC) and will be held in conjunction with the Hamilton ARC Hamfest 2013 which is being held at the same location. All RAC members are encouraged to attend the Annual General Meeting.

Date: Saturday, October 5, 2013.

Time: 1 pm

Place: The Annual General Meeting will be held in Marritt Hall at the Ancaster Fair Grounds at 630 Trinity Road at the southwest corner of highways #52 and #53, in Jerseyville, just west of Ancaster, Ontario.

Agenda items will include:

- Report of the President
- Review of the 2012 finances
- Appointment of auditors for 2013
- Amendment to RAC Constitution (see column at right)
- Question and Answer period

This is your opportunity to hear what your representatives have been doing over the past year, to raise questions, and to make suggestions about how RAC is managed and where it is going in the future.

The meeting will be attended by some of the members of the RAC Board of Directors and Executive and is open to all RAC members. In addition there will be a planned Webinar which RAC members can attend remotely.

For more information on the Hamilton ARC Hamfest please see the article below or visit the Hamilton ARC website at http://www.hamiltonarc.ca.

HAMILTON AMATEUR RADIO CLUB HAMFEST 2013

The Hamilton Amateur Radio Club is pleased to host the Annual General Meeting of Radio Amateurs of Canada as part of its annual Amateur Radio, Computer and Electronics Fleamarket.

The HARC Hamfest will be held on **Saturday, October 5**.

Place: The Concession Building at the Ancaster Fair Grounds, 630 Trinity Road, Ancaster, L0R 1R0 at the southwest corner of highways #52 and #53, in Jerseyville, just west of Ancaster, Ontario. Latitude 43° 11' 25" N Longitude 80° 02' 32" W

Time: Vendors 7 am; Public 9 am.

Cost: General Admission: $7 per person. Vendor admission $7 per person. All tables are $10 each (regular 8-foot table). Tables are reserved upon receipt of payment on a first come basis. Please book in advance to avoid disappointment.

Talkin on repeater VE3NCF 146.76 (-) tone 131.8 or 444.075 (-) tone 131.8.

For more information please contact Fleamarket Chairman John Boswell, VA3BOZ, at <va3boz@hamiltonarc.ca> or at 905-227-0155 or Vendor Liaison Mardy Eedson, VE3QEE at <ve3qee@hamiltonarc.ca> or at 905-648-0187.

Please visit the Hamilton ARC website at http://www.hamiltonarc.ca for a flyer and a map and to download a registration form. For additional information about the Hamfest please see the Coming Events section on pages 62-63.

— NOTICE —

PROPOSED AMENDMENTS TO THE RAC CONSTITUTION

A Board meeting was held on February 17, 2013 in Ottawa with all the RAC Directors present. At the meeting the RAC Directors unanimously passed a motion recommending to the Annual General Meeting the following:

That the constitution of the Radio Amateurs of Canada (as approved by the Minister in November, 2010) be modified as follows:

SECTION 8. OFFICERS

Article 10 – Removal

a) That the RAC President can terminate any Executive member with an appeal process to the RAC Board. The appeal by the impacted party must be filed with the Board by no later than the second next scheduled Board Meeting.

b) Any Executive officer may be removed from office at any time by a simple majority vote of the Board, which may then appoint a successor to fill the unexpired term.

However, before the RAC Constitution can be modified by this motion it is necessary for the RAC membership to approve and vote on such motion at an Annual General Meeting (AGM) duly called.

The next RAC AGM will be held in conjunction with the Hamilton ARC Hamfest 2013 in Jerseyville (near Ancaster), Ontario on Saturday, October 5, 2013.

At the AGM RAC members who are in attendance will be invited to vote on and give final approval to the motion provided above.

I look forward to your attendance.

Geoff Bawden, VE4BAW
President – Radio Amateurs of Canada

— AVIS —

PROPOSITION D'AMANDEMENTS A LA CONSTITUTION DE RAC

Une réunion du Conseil d'administration a eu lieu le17 février 2013 à Ottawa à laquelle tous les directeurs de RAC ont participé. Au cours de la réunion, tous les directeurs de RAC, unanimement, ont adopté une résolution demandant à l'Assemblée annuelle de se pencher sur le projet de résolution suivant :

Que la constitution de Radio Amateurs du Canada (tel qu'approuvée par le ministre en novembre 2010) soit modifiée comme suit :

SECTION 8. OFFICIERS

Article 10 – Révocation

a) Que le président de RAC puisse mettre fin au mandat d'un membre de l'Exécutif avec possibilité d'appel devant le Conseil d'administration de RAC. L'appel par la partie touchée doit être logé auprès du Conseil d'administration au plus tard pour la deuxième réunion dûment prévue.

b) Tout membre de l'Exécutif peut être démis de ses fonctions en tout temps à la majorité simple des votes du Conseil d'administration, lequel peut nommer un successeur pour compléter le mandat.

Cependant, tant que la constitution de RAC n'aura pas été modifiée par la présente motion, il est nécessaire que ce soit les membres de RAC qui approuvent et votent une telle motion à une Assemblée générale annuelle (AGM) dûment convoquée.

La prochaine Assemblée générale annuelle (AGM) de RAC sera tenue conjointement avec le hamfest 2013 du Hamilton ARC à Jerseyville, juste à l'ouest d'Ancaster, Ontario, le samedi 5 octobre 2013.

Les membres présents à l'AGM de RAC seront invités à voter et à approuver en dernière instance la motion ci-devant proposée.

Je compte sur votre participation.

Geoff Bawden, VE4BAW
Président
Radio Amateurs du Canada

– Traduction par Claude Lalande, VE2LCF

— AVIS —

RADIO AMATEURS DU CANADA INC.

Radio Amateurs du Canada est heureux de tenir son Assemblée générale annuelle (AGM) à Ancaster (Hamilton), Ontario. L'hôte de l'AGM est le Hamilton Amateur Radio Club (HARC). Il agira en collaboration avec le Hamilton ARC dont le Hamfest de 2013 se tiendra au même endroit. Tous les membres de RAC sont invités à participer à l'Assemblée générale annuelle.

Date : Samedi le 5 octobre 2013.

Heure : 13 heures

Lieu : L'Assemblée générale annuelle se tiendra au Marritt Hall du Ancaster Fair Grounds, situé au 630 Trinity Road à l'angle sud-ouest des autoroutes 52 et 53, à Jerseyville, juste à l'ouest d'Ancaster, Ontario.

L'ordre du jour sera comme suit :

- Le rapport du président
- La revue des états financiers de 2012
- La nomination du vérificateur pour 2013
- Amendements à la constitution de RAC (voir la colonne à gauche)
- Période de questions et de réponses

Voici votre chance d'entendre vos représentants vous dire ce qu'ils ont accompli au cours de l'année dernière, poser des questions, faire des suggestions sur la gestion de RAC et connaître ses intentions futures.

Plusieurs membres du Conseil d'administration et de l'Exécutif de RAC participeront à l'assemblée, à laquelle tous les membres de RAC sont bienvenus. De plus, des membres de RAC pourront participer à l'assemblée à distance au moyen d'un Webinar prévu à cet effet.

Pour plus d'informations sur le hamfest du Hamilton ARC, voir l'article ci-dessous ou visiter le site web du Hamilton ARC à : http://www.hamiltonarc.ca

LE HAMFEST 2013 DU HAMILTON AMATEUR RADIO CLUB

Le Hamilton Amateur Radio Club est heureux d'être l'hôte de l'Assemblée générale annuelle de Radio Amateurs du Canada et d'y organiser simultanément son « Amateur Radio, Computer and Electronics Fleamarket » annuel.

L'hamfest de l'HARC aura lieu le **samedi 5 octobre**.

Lieu : le « Concession Building » du Ancaster Fair Grounds, 630 Trinity Road, Ancaster, L0R 1R0, situé à l'angle sud-ouest des autoroutes 52 et 53, à Jerseyville, juste à l'ouest d'Ancaster, Ontario. Latitude 43° 11' 25" Nord ; Longitude 80° 02' 32" Ouest

Heure : vendeurs 7h00 ; public 9h00.

Coût : admission générale : 7 $ par personne ; vendeurs : 7 $ par personne. Toutes les tables sont à 10 $ chacune (table régulière à 8 pattes). Les tables sont réservées sur réception du paiement, premier arrivé, premier servi. Veuillez s.v.p. réserver à l'avance pour éviter d'être déçu.

Utilisation du répéteur VE3NCF 146.76 (-) tonalité 131.8 ou 444.075 (-) tonalité 131.8.

Pour plus d'informations, communiquer avec le président organisateur du Fleamarket, John Boswell, VA3BOZ, à <va3boz@hamiltonarc.ca> ou à 905-227-0155 ou encore avec le préposé à la liaison avec les vendeurs, Mardy Eedson, VE3QEE à <ve3qee@hamiltonarc.ca> ou à 905-648-0187.

S.v.p., vous rendre sur le site du Hamilton ARC à http://www.hamiltonarc.ca pour tracer votre itinéraire ou pour télécharger le formulaire d'enregistrement. Pour plus d'informations au sujet du hamfest, voir la section « Évènements à venir » aux pages 62-63.

ANNOUNCING THE RAC AFFILIATED CLUB CHALLENGE

Radio Amateurs of Canada is pleased to announce the RAC Affiliated Club Challenge which will start in 2014.

PURPOSE OF THE CLUB CHALLENGE

- To be a mechanism to encourage Affiliated Clubs to be active in reaching out in their own region to recruit already certified Amateurs who are not members of their club.
- To be a cost effective way of encouraging RAC Affiliated Clubs to expand RAC membership among their current members.
- To help RAC Affiliated Clubs develop more active channels for the recruitment and training of new Amateurs.

MECHANISM FOR ENTERING THE CHALLENGE

Clubs wishing to enter the challenge must register to participate prior to December 31, 2013.

Affiliated Clubs must renew their affiliation annually prior to December 31 each year.

Those clubs renewing or joining the RAC Affiliated Club Program who wish to participate in the Club Challenge will have to check an additional registration box on the application form. They will also have to submit a complete list of club members and their call signs, and indicating which members are RAC members and Maple Leaf Operator members (with RAC membership number) and also listing non-RAC members in the club. It is anticipated that the Affiliated application form will be able to be completed online and sent electronically with other required information to reduce “snail-mail” and paperwork.

The club membership list, including newly certified Amateurs and assigned Elmers (mentors), will require the signature of the club President and one other member of the club Executive. The RAC Affiliated Club Challenge will mainly be assessed using the “honour system” and it is hoped that participation will be in the spirit of the Challenge. Spot checks will be made at random by the RAC Affiliated Clubs Program Coordinator and disqualification is possible if variations are found.

Recognizing that RAC has affiliated clubs with as few as five members to over 200 members, it is necessary to classify the clubs based upon club membership numbers.

Registered clubs will initially be classified into four categories based on total club membership: **QRP** (less than 20 members); **Barefoot** (20-60 members); **Kilowatt** (61-100 members); and **Kilowatt Plus** (greater than 100 members).

Clubs registering, will be listed, by category, in *The Canadian Amateur* magazine and on the RAC website on the new RAC Affiliated Club Challenge page.

SCORING THE CLUB CHALLENGE

Clubs will be scored on the point system based upon the following point assignment:

- 2 points for each RAC club member
- 3 points for each Maple Leaf Operator club member
- 1 point for each non-RAC club member

Additionally add 1 point each for:

- New Amateur certified in the year from a club sponsored course.
- Newly certified Amateur paired with an Elmer (mentor).

Note: *Newly certified Amateur and Elmer points only apply to the year of certification.*

Annually, at the time of renewal with a certified list, the change in points from the previous year will be assessed and the **top three clubs** in each category will receive special recognition by RAC in the TCA magazine and on the RAC website and will be able to download a certificate recognizing the club’s achievement.

Clubs renewing affiliation or becoming affiliated with RAC for 2014 will find instructions and the necessary forms at: https://www.rac.ca/en/rac/programmes/affiliated-clubs/

SOME IMPORTANT POINTS

1) All current club affiliations expire on December 31, 2013 and clubs failing to renew by that date will find their club name removed from the affiliated clubs list on the RAC website. Affiliation applications must be sent to the address found on the application form (see below) and *not* to RAC Headquarters.

RAC Affiliated Club Program
PO Box 51
Saint John, NB E2L 3X1

2) Starting in September, renewals will be sent to all affiliated clubs to the listed affiliated club contact person on file. Recognizing that positions within each club change frequently, I ask your help in getting renewals forwarded to the club Executive so that your club isn’t dropped from the affiliated clubs list.

Note: For RAC affiliated clubs participating in the Liability Insurance program, each additional RAC member reduces the cost of club liability insurance by $10.

Please see the article on page 19 for more information on the RAC Affiliated Club Liability Insurance Program.

Len Morgan, VE9MY
RAC Affiliated Clubs Program Coordinator

IMPORTANT NEWS ABOUT THE RAC AFFILIATED CLUB LIABILITY INSURANCE PROGRAM

Renewal time for 2014 is getting close. The time to Start Planning is NOW!

The time is quickly approaching for Canadian Amateur Radio Clubs taking RAC Liability Insurance coverage to start preparing for renewing their coverage. RAC Liability Insurance operates on a calendar basis – from January 1 to December 31 – and does *not* automatically renew.

To keep a Club's RAC Liability Insurance valid it must ***be renewed annually****, in advance, to remain in effect. This the Club's responsibility.*

In recent years there has been an increasing incidence of Club's not renewing in time to keep their coverage in effect. This has caused several problems and could jeopardize the continuation of the Insurance Program by the Insurer. A major reason that RAC has been able offer such low rates for Liability Insurance was to have minimal administration expense for both the Insurer and RAC. This required doing all renewals at one time, in a single submission. The late renewals have created a tremendous amount of additional submissions to the Insurer, requiring extra work on their part as well as extra volunteer work and expense for RAC.

Late insurance applications hold up RAC's submission to the insurer which:

- delays the Insurer's ability to process the list and issue the blanket policy required for coverage
- prevents the issuing of Certificates of Insurance to Clubs
- prevents the timely issuance or renewal of additional insureds
- may leave the Club with no liability coverage until the late application can be processed

Therefore, ***for 2014****, any Club who wishes to renew their RAC Liability Insurance coverage, must have their completed applications submitted to RAC by the dates shown below. Failure to get your submission to RAC in time will result in a* ***late penalty of $100*** *and may compromise coverage.*

As before, any new Clubs applying can do so at any time and their fee will be prorated for the balance of that year. Additional processing time can be required for approval depending upon club activities listed. Fee prorating does not apply to Clubs who have previously taken RAC Liability Insurance.

KEY DATES FOR RAC LIABILITY INSURANCE RENEWALS

Insurance period: January 1, 2014 to December 31, 2014

Renewal Applications (complete and with payment) must be received by **October 31, 2013** for coverage to renew in 2014.

Any corrections required to renewal applications submitted before October 31, 2013 must be received by November 30, 2012.

All Renewal Applications or corrections received ***after*** *these dates for 2014 coverage will require a late payment fee of $100 to be included before it can be processed. In this case, coverage on January 1 cannot be guaranteed.*

LIABILITY INSURANCE RENEWAL PROCESS

Complete details of what is required to renew your Club's Liability Insurance is shown in detail on the RAC website at https://www.rac.ca/en/rac/services/insurance. All of the forms and the procedure to follow is provided there in detail.

How can your Club help expedite the Process?

We have had several years of renewals with the current Program and the application paperwork and fee calculations are improving, but we need every club's help to make this process timely and seamless.

1) Please make sure your application is on time. The number of late renewals must be reduced. Your Club executive needs to make sure that the renewal process is started early in the Fall so that the application can be submitted in time.

2) Please make sure all forms required are completed and are correct. All required forms are listed on RAC's website at: https://www.rac.ca/en/rac/services/insurance

3) Please check that your insurance calculations are correct and all required fees are submitted. If you are unsure please contact the Insurance Administrator at: insurance@rac.ca

4) Check that the club contact information listed is correct, particularly the email address.

5) Make sure to complete and submit the RAC Club Affiliation Renewal form, including annual fee, to ensure the club meets the requirements for RAC Affiliation. This is required to be eligible for RAC Liability Insurance.

6) If you have any Additional Insured Certificates, they must be renewed every year as well (there is no charge to renew if there are no changes). See below for more information.

Special Considerations for Additional Insured Certificates

Clubs requiring an Additional Insured certificate(s) must have a written contract/agreement with that additional insured; i.e., City, CBC, Rental facility, etc.

Requests for an Additional Insured certificate(s) have a **one-time** fee of $75 plus tax (regardless of the number of new Additional Insureds requested) when they are all applied for at the same time for new or renewal applications.

Additional Insureds **must** be renewed for each subsequent year at renewal.

There is no charge for the renewal of existing Additional Insureds, if nothing has changed from the year before.

If you have an Additional Insured Certificate(s) from a previous year and require a new Additional Insured(s) Certificate for another party, then the one time processing fee of $75 + tax would apply for the new applicant(s).

Please note that Additional Insured requests take at least **two weeks** plus mail turnaround time to process, realistically one month. Do not expect to apply one week before an event, such as Field Day, and receive a Certificate in time. So please think ahead and avoid being disappointed when a certificate cannot be obtained.

IN SUMMARY

To improve service and reduce the volunteer workload and prevent delays, **please** make sure that:

- **Your application is on time.**
- The application paperwork is correct and complete.
- Insurance fee calculations are correct and the fee is included in submission.
- The club contact information is correct and included, *particularly the email address*.
- You allow at least four weeks for any Additional Insured Certificate.

Thank you,
The RAC Insurance Committee

QUA – A TOPICAL DIGEST

Bob Eldridge, VE7BS
920 Erickson Road
RR2 Pemberton, BC
V0N 2L2
E: ve7bs@rac.ca

UNDERSTANDING YOUR ANTENNA ANALYZER

In this down to earth and eminently readable book, Joel Hallas, W1ZR, explores the mechanical, performance and impedance characteristics of antennas, highlighting those that can be measured by an antenna analyzer.

He explains:

why measurements are necessary, how to make them, how to make antenna adjustments, the importance of the feedline, other applications for the analyzer as a general test instrument, and enhancements of it.

There is also a very comprehensive survey and test review of available analyzers, with the advantages and limitations of the various types, analog and digital.

Published 2013, ARRL #2889, US$25.95.

75 OHM ANTENNA FEEDERS

When reviewing W1ZR's book on antenna analyzers, I asked Joel to expand on the implications of using an analyzer designed for 50 ohms feeder to measure the SWR on a 75 ohms feeder.

His response was a veritable tutorial.

He wrote:

"Well, 75 ohm coax is fine for feeding antennas, and all things being equal has slightly less loss than 50 ohm cable, if everything is matched.

Before we talk about accuracy of measurement, it's important to decide what we actually want to measure. If your transmitter is designed to feed a 50 ohm load, and you are measuring at the transmitter end of the cable, from the transmitter's perspective, what you really want to know is how close to a 50 ohm load your antenna system presents to the radio. If the 50 ohm SWR meter reads 1:1, that means the transmitter is seeing a 50 ohm load, just what you want.

That also means that the 75 ohm coax is operating at a 75/50 or 1.5:1 SWR – you can't have this both ways, but that kind of mismatch is usually not significant. The loss on the coax will be slightly higher than if the SWR on the coax were 1:1, but no big deal.

If you have an antenna with a 75 ohm feedpoint impedance, fed with your 75 ohm coax, the SWR on the coax will be 1:1 – minimum coax loss. But the transmitter will see 75 instead of 50 ohms and 'think' that the SWR is 1.5:1. This usually isn't a problem either, although at some SWR, the transmitter will usually start to reduce its power output – usually not at 1.5:1 though.

Another interesting and frequent case is if you feed a 50 ohm antenna with 75 ohm coax. In this case the SWR on the coax itself is 1.5:1. The impedance at the bottom will vary with line length around the 1.5:1 SWR circle on a Smith chart (if you think graphically). Every 1/4 wave it will be resistive, one time with a Z of 75/1.5 or 50 ohms, the next half circle 75 x 1.5 = 112.5 ohms. If the 112 ohm length is plugged into the 50 ohm transmitter, it will think that the SWR is 2.3:1 – now it will be more likely to fold back and reduce power. Of course, if you add an additional 1/4 wave of coax it will be back to 50 ohms, and the transmitter will be happy as a clam. The limitation here is that it is pretty much a one band arrangement.

That is a summary of the different cases.

Now, as to the actual measurement situation. A 50 ohm SWR bridge will read the SWR as if the system were the 50 ohm transmitter in the above example.

This is great for tuning the system, so it works well with the radio, but doesn't give you the actual SWR on the 75 ohm line.

A true forward and reflected wattmeter, such as the popular Bird Thruline, doesn't really care what the line impedance is – it gives you the actual forward and reflected power at that point in the line no matter what impedance system you are using."

SAQ 2013 BROADCAST

N1EA asked SM6NM, who runs the Grimeton Radio / SAQ transmissions from the last remaining operational Alexanderson Alternator, for a recording of the 2013 transmission from SAQ. Every year, this transmission goes out on 17 kHz or so, as a memorial to the first "continuous wave" transmitters (as opposed to "spark").

You will find the supporting story at http://www.grimeton.info/grimeton_radio_station.html and the recording at http://archive.org/details/GrimetonRadioSaq201306300900UtcBroadcast.

You may have to update your Flash Player to play it.

SENIOR MOMENTS

This appeared in "Contact", the newsletter of the North Shore ARC (North Vancouver, BC). Quite interesting, but it doesn't help much. I find the best way to keep focus is to keep saying out loud what it is I intend to do, until I start to do it.

"For senior Hams – Special report based on recent research: :-) Ever walk into a room with some purpose in mind, only to completely forget what that purpose was? Turns out, doors themselves are to blame for these strange memory lapses. Psychologists at the University Of Notre Dame have discovered that passing through a doorway triggers what is known as an Event Boundary in the mind, separating one set of thoughts and memories from the next.

Your brain files away the thoughts you had in the previous room and prepares a blank slate for the new locale. Thank goodness for studies like this. It's not our age, it's that damn door!"

SNOW AND RAIN STATIC

In a discussion on the Topband Reflector, K2AV wrote:

"Rain static on stacked beams on a tower is often reported with this pattern: Rain static on the top beam is high, whereas it is low or non-existent on the lower. Since the upper beam can hardly shield the lower beam from getting wet in the rain, it cannot be that the drops are charged.

Even if they are charged at height, while they are falling, they are in constant contact with saturated air and will equalize on the way down. Try to maintain static charge on an object in steam from a hot shower.

When high beam yes, low beam no, rain static is being observed...

What is differentiating the two beams is the characteristic of high voltage opposite charges to accumulate charge on the structure which is closest to the opposite source of charge, e.g., sky in this discussion. Thus the upper beam, being closest to the sky on a complex conductive structure (tower and all its stuff), will be carrying the charge. The raindrop is

neutral, and at touching, accumulates a tiny charge from the metal, which because of our oh-so-sensitive receivers is audible.

Another aspect of this system is that, for purposes of creating static, the tower must be grounded by some method (usually true unless specifically insulated), to allow the flow of opposite charge from the ground to the highest metallic system, which in turn must not be effectively insulated from the tower or from directly touching the rain.

*Complete insulation from the rain will minimize static on beverages, as *sometimes* does forest high overhead, as the charge max is well overhead.*

Loblolly pine in my little forest seems highly conductive. Lightning selects the loblollies. Nine of the last ten dead trees I have had cut down are lightning struck loblollies, lightning-selected out of a mix of loblolly, oak, poplar, maple, sweet gum, etc. The other was a poplar 30-feet higher than the rest of the crown.

If the method of feed and termination does not allow the beverage (either kind) to see ground, then there is no way for the earth charge to migrate to the beverage wire, the wire will not charge the drops at contact, and it will be silent.

My 160 3/8-wave inverted L (up 95, out 105) is isolated by the high voltage isolation transformer (double polyimide plus teflon sleeve) from any charging ground, and most of the wire is PE insulated #12 stranded. The FCP (folded counterpoise) is at 8-10 feet, 90 feet below the area tree crown. Three separate methods of isolation are at work.

My tribander, at the other end of the lot on the tower, gets rain/snow static a-plenty. The driven element has a DC path to 'local' ground via the feedline. It has a bead balun that came with the beam, nothing that isolates DC.

The wire/aluminum is the villain, not the raindrop. The raindrop was just minding its own business floating down until it got zapped by a pesky piece of antenna."

WHY 6.3V HEATERS?

Why was 6.3V chosen as the filament voltage for tubes, except for that of the rectifier, which was 5V? And why was the rectifier "directly heated", with no separate cathode, whereas the other tubes were "indirectly heated"?

These questions were posed by ZL1AN, in his "Morseman" column in *Break-In* magazine. Summarizing several answers, it seems that 6.3V was used because it was the voltage supplied by three lead-acid cells, commonly used to supply the larger currents needed by battery sets. Rectifiers were directly heated because, for a given filament current, greater emission efficiency results, and the filament also comes up to operating temperature faster, giving a "soft start".

The main reason a voltage other than 6.3 was chosen for the rectifier was that it is necessary for a separate, well insulated heater winding to be provided on the power transformer, because the full plate voltage appears on the rectifier filament, so it was useful to have the use obvious.

There were rectifiers (6X4, 6X5) with indirectly heated filaments that could be run from the same winding as the other tubes, but they were limited to supplying about 70 mA and were prone to shorting.

EXPIRING IRCs

Not many Amateurs use International Reply Coupons these days, this being a very expensive way to prepay postage. The present "Nairobi" model coupons expire on December 31, 2013, and the new "Dohar" model is already available, and will be good until December 31, 2017.

Some Post Offices know little about IRCs and if you buy any, you had better be sure they are not on their way to being unusable.

TCA

VOIP FOR REMOTE OPERATING

Cliff Linton, VE6PLC

There are numerous programs that can be used to control an Amateur radio remotely (Kenwood's ARCP-480 software, for example), but programs for getting audio to and from the remote radio are more limited. Using two Skype accounts will work but I was not comfortable having to use a third party, especially when operating remotely from within my home network.

I have found that SJphone is easy to install and use to provide the audio connection between the remote computer and the host computer. SJphone provides a direct computer to computer connection that doesn't involve going through a third party. I have tested SJphone with Windows XP, Windows 7 (32 and 64 bit), and Windows 8 (64 bit) on various hardware platforms including a two year old netbook, a four year old desktop, a one year old laptop and an eight year old laptop.

First, here is some background. The Internet and your home network use numbers to find destinations. Tell your Internet browser to go to 74.125.225.137 and you will find yourself at the Google search window. Tell your browser to go to www.google.com and you will end up at the same Google search window. The steps your browser takes to get there are more complicated using the name than when you type the numbers. Humans typically find it easier to remember google.com rather than 74.125.225.137 so the Domain Name System (DNS) was developed to associate domain names with their actual IP addresses.

When you tell your browser to go to www.google.com, the computer goes to the IP address for a DNS server and asks the DNS server for the IP address associated with www.google.com. The DNS server provides the IP address 74.125.225.137 and the browser goes to that IP address (see Figure 1). Computers on your home network also have IP addresses as does the router that connects your computers to the Internet.

DHCP AND STATIC IP ADDRESSING

Dynamic Host Configuration Protocol (DHCP) provides a way for a computer to get the IP address settings it needs to connect to a network. The computer sends out a DHCP request and waits for a DHCP server to respond.

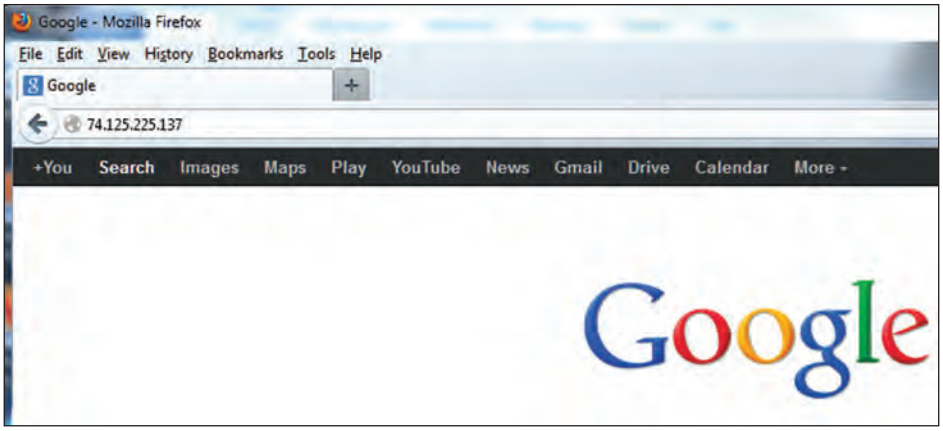


Figure 1: The DNS server provides the IP address 74.125.225.137 and the browser goes to that IP address.

In your home network that DHCP server is typically your router. The DHCP server tells the computer what IP address, what subnet mask, what default gateway IP address, and what IP address for DNS lookups it should use. This information can also be configured using static IP addressing instead of DHCP.

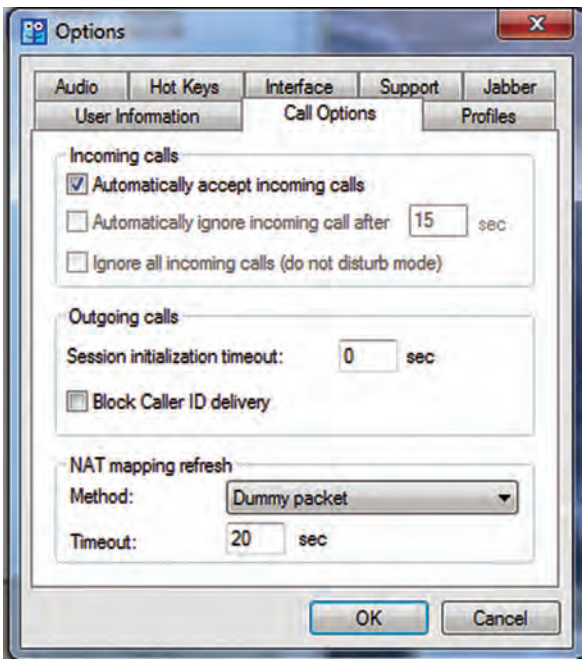
Why use static IP addressing on a home network? For remote operation of an Amateur Radio, it is desirable to have a fixed IP address configured for the host computer to allow a remote station to connect to it over the Internet.

NETWORK ADDRESS TRANSLATION AND YOUR ROUTER

Most home Internet connections use a router that provides a Network Address Translation (NAT) service so that multiple computers on your home network can access the Internet without conflict. Your router is actually bridging between two networks: your home network and the network provided by your Internet Service Provider (ISP). ISPs typically use DHCP to provide IP addresses to their clients.

The router, on booting up, uses DHCP to ask the ISP's DHCP server for the necessary settings to use on its interface that connects to the ISP.

On its home network side, the router typically performs the role of a DHCP server, handing out IP address settings to computers and other devices (for example, IPTV set-top boxes, Wi-Fi enabled eReaders and tablets) that connect to it.



So, on the Internet side of the router there is one IP address that is used for all Internet traffic and on the home network side there are multiple devices – each with an assigned IP address.

When computers on the home network access the Internet, the router uses NAT to keep the Internet traffic – to and from each computer – separate while only using its one Internet facing IP address. For a much more detailed explanation of how NAT works, the "How Stuff Works" website at http://www.howstuffworks.com/nat.htm covers it well.

Figure 2: Change settings to "Automatically accept incoming calls".

Let's get back to our VoIP solution. SJphone was developed by SJ Labs. Free versions for Windows, Mac and Linux operating systems can be downloaded from http://www.sjlabs.com/sjp.html. Install SJphone and configure it to use the desired sound card. SJphone is a full featured program, but all we are using is the PC to PC direct connection.

The software on the host computer mostly uses the default settings. Under "Call Options", change the setting to "Automatically accept incoming calls" and then under "Audio" select the appropriate sound card. From the main menu, I also set it to reject anonymous calls (see Figures 2 and 3).

I have had to disable Direct Sound under "Options, Audio" on computers using Windows 7 and Windows 8 in order to get the software to hear the audio coming in from the sound card inputs, but otherwise I have had no problem using SJphone.

SJphone on Windows XP has worked fine with Direct Sound enabled on two computers I have tried it on.

The SJphone interface on the host computer is shown on in Figure 4.

I created a profile called TS-480 Host, which is a clone of the default SIP Direct profile.

You can just use the default profile. The Received Calls log shows four connections from the remote computer.

On the remote computer, to connect to the host, type in "sip:192.168.0.100" or whatever the host IP address is or "sip:name" (for example, "sip:ve6plc.dlinkddns.com") and then click on the blue handset. Clicking on the red handset hangs up the connection (see Figure 5).

Once the connection is made, audio levels can be adjusted at various places at each end to optimize the sound (SJphone, sound card, radio in and out).

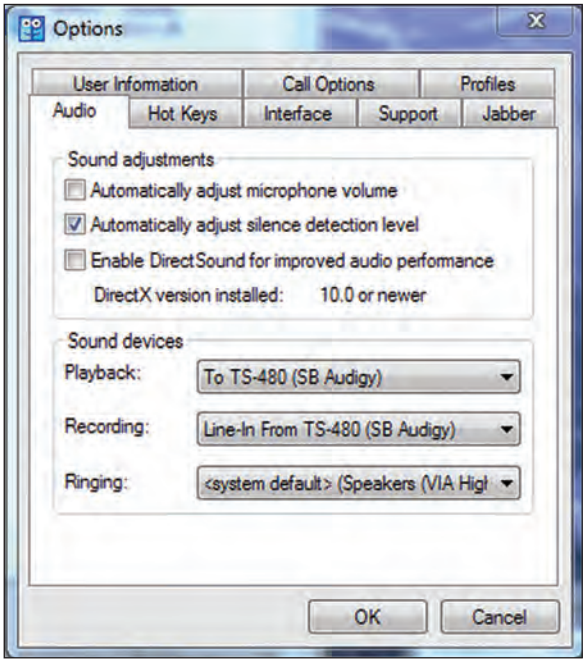


Figure 3: Under "Audio" select the appropriate sound card.

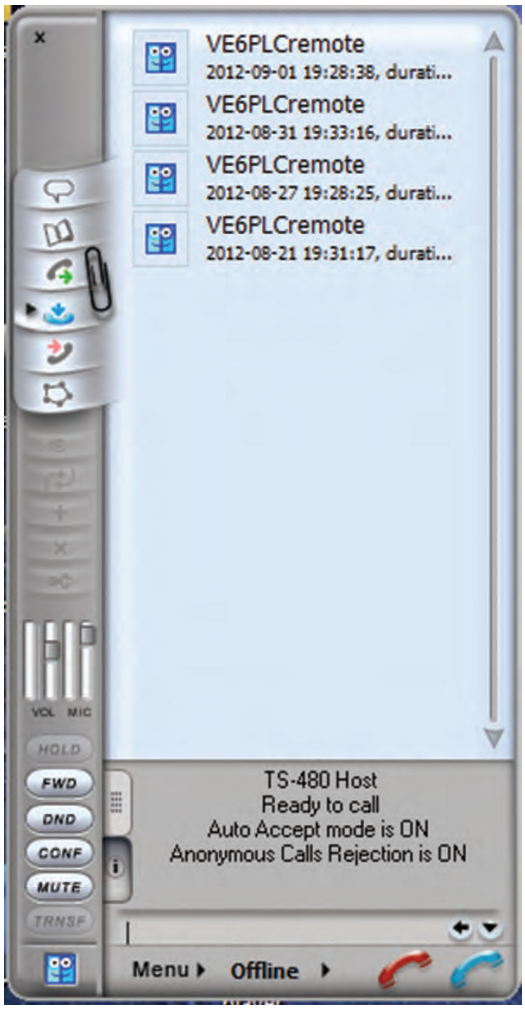


Figure 4: The SJphone interface on the host computer.

HOST ROUTER CONFIGURATION

On the host router, configure port forwarding for the audio port. This port forwarding setup connects traffic from the Internet using the specified ports to a specific IP address within the local network. The example provided in Figure 6 on the next page shows port forwarding for the Kenwood ARCP-480 radio control program as well as for SJphone.

Note that the host computer has a static IP address (192.168.0.100) and not a DHCP assigned address. If DHCP is used, the port forwarding settings would have to be changed each time the host computer was assigned a new IP address by DHCP.

Most computers are configured to "Obtain an IP address automatically" by default, which means the settings are assigned by DHCP.

An easy way to configure the host with a static IP address is to make note of the DHCP assigned settings, change the option to "Use the following IP address" and enter those settings into the IP address, Subnet mask, and Default gateway fields as shown in Figure 7.

For operation over the Internet when the host end's Internet connection does not use a static IP address (typical for many Internet Service Providers), a dynamic DNS service can be used. The router reports the WAN IP address changes to the DDNS service.

The remote computer looks up the DNS entry for the host computer and is given the updated IP address by the DDNS service. D-Link provides such a service in conjunction with many of their routers and DSL gateways. The service is free and relatively easy to set up. Go to http://www.dlinkddns.com/login for more information. You can do an Internet search for "free Dynamic DNS" to find other providers of DDNS services.

Figure 5: Clicking on the red handset hangs up the connection.

Local Host	Local Address	Protocols	Status
192.168.0.100	192.168.0.100	ARCP-480 - TCP Any -> 50000	Active
192.168.0.100	192.168.0.100	SJPhone_SIP - UDP Any -> 5060	Active

Figure 6: This example shows port forwarding for the Kenwood ARCP-480 radio control program as well as for SJphone.

Figure 7: An easy way to configure the host with a static IP address is to make note of the DHCP assigned settings, change the option to "Use the following IP address" and enter those settings into the IP address, Subnet mask and Default gateway fields.

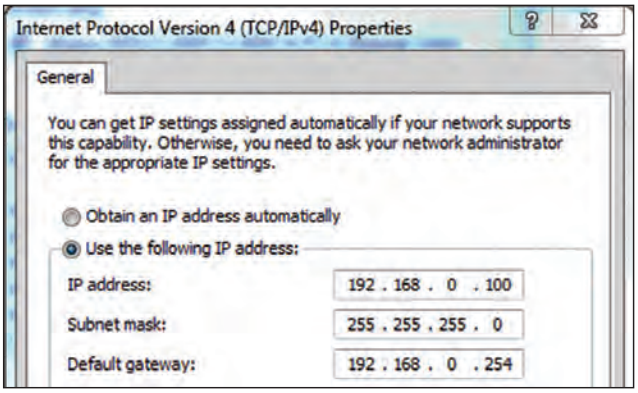
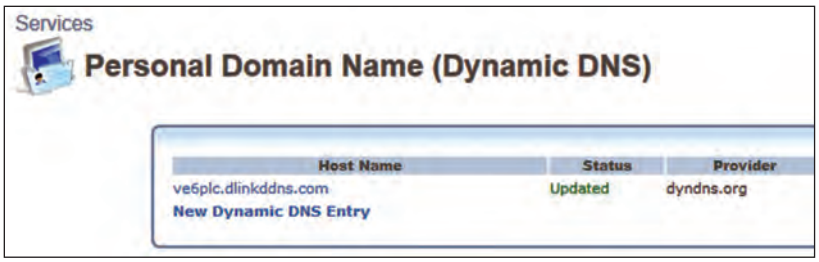


Figure 8 below shows the DDNS setting in my D-Link router.



With SJphone, radio control software, my netbook and a PC headset, I have been able to operate my home station from anywhere within the range of my home wireless network (upstairs, downstairs, out in the backyard) and from any place where I can get an Internet connection.

ABOUT THE AUTHOR

I am a third generation Radio Amateur, following in the footsteps of my great uncle, Bill Harwood (then VE6LA) and my Dad, Gerry Linton, VE6PL. I was licensed in Calgary in November 1993, with call sign VE6PLC. I have worked for Telus/AGT for 25 years, all of them in the data communications side. I am currently designing data services that involve DSL and fibre facilities connecting routers and switches.

I have enjoyed the gradual integration of computers and data communication with Amateur Radio. Having two hobbies (Amateur Radio and computers) and my profession coming together has made work less like work.

My home network has two routers, three switches, five computers, two game consoles, plus various other devices – all able to connect to the Internet and each other. I have two laptops and a netbook set up as clients for remotely operating my Kenwood TS-480 rig, mainly over my home network. I often check into the Alberta Public Service Net from my living room or while cooking in the kitchen. Life is good!

TCA

Visit: http://www.cafepress.ca/rac_radio

AROUND THE CORNER...

POWER LINE INTERFERENCE CONTACT INFORMATION

Industry Canada has posted contact information to report Power Line Radio Interference. This information covers all the major Power Line companies in Canada.

The posting can be found at:

http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10641.html.

The information is provided with the cooperation of the Canadian Electricity Association and its member power utilities.

Radio Amateurs in Canada are encouraged to use this contact and reporting information when confronted with suspect power line interference.

Radio Amateurs of Canada is pleased to see the release of this information which is the culmination of ongoing discussion at meetings of the Canadian Amateur Radio Advisory Board (CARAB) between RAC and Industry Canada.

Norm Rashleigh, VE3LC
RAC representative to the Radio Advisory Board of Canada (RABC)

INFORMATION DE CONTACT POUR BROUILLAGE PAR LIGNES ÉLECTRIQUES

Industrie Canada vient de publier de l'information de contact pour rapporter du brouillage radio par les lignes électriques. Cette information couvre tous les distributeurs d'électricité importants au Canada.

La publication peut être trouvée à :

http://www.ic.gc.ca/eic/site/smt-gst.nsf/fra/sf10641.html.

L'information est fournie avec la coopération de l'Association canadienne de l'électricité et de ses membres distributeurs d'électricité.

Les radioamateurs au Canada sont incités à utiliser ce lien et cette information de rapport lorsque confrontés avec de l'interférence électrique suspecte.

Radio Amateurs du Canada est heureux de voir la diffusion de cette information, qui est le point culminant de discussions en cours dans des rencontres du comité consultatif canadien de la radio amateur (CCCRA) entre RAC et Industrie Canada.

Norm Rashleigh, VE3LC
Représentant de RAC au comité consultatif canadien de la radio (CCCR)

RAC MAPLE LEAF OPERATOR MEMBERSHIP
ADHÉSION À "OPÉRATEURS MAPLE LEAF" DE RAC

David Argo, VE3NLZ
Trevor Arkell, VE3QXR
Adam Aultman, VA3AUL
Michael Aultman, VA3MPR
Gary Badcock, VO1GWC
A James Ballard, VE9AJB
Dennis Bancesco, VE6ATC
Doug Bannard, VE3SPF
Shawn Barnard, VE3KYQ
David C Barnes, VO1YA
Larry Barnett, VE6LGB
Bill Barrie, VE3AAS
Douglas Barry, VE7WLF
Michael Bell, VE3NOO
John R (Jack) Belleghem, VE3HD
Michael F Belliveau, VE6XZM
Bruce Bernard, VE1TIN
Larry Berta, VE3LXV
Serge Bertuzzo, VA3SB
Francois Berube, VA2RC
Brian Biggings, VE3XA
Christian Bisaillion, VE3CBK
Bill Boskwick, VE4BOZ
Terry Bosse, VE6LL
Robert Boyd, VE3SV
Robert Boyer, VE3XBB
Patrick Brewer, VE3KJQ
Michael Brickell, VE3TKI
Ronald O Brook, VE4RON
O Ernest Brown, VA3OEB
Mike David Brown, VA3GRL
Matthew Eric Brown, VE3OIC
P J Buckway, VY1PJB
Ian Thunder Burgess, VA6EMS
Paul Burggraaf, VO1PRB
Rick Burke, VO1SA
Clarke M Burnett, VE4MB
David Caddell, VA7VVV
Fred Cain, VE3JMJ
Ralph Cameron, VE3BBM
Mark Capewell, VA7MNV
Gilles Chevalier, VA2CG
John Christensen, VE3IAO
Hugh D Clark, VE9HC
David G Clarke, VE6LX
Geoff Clarke, VE3JBD
David Colton, VO1TK
John Connor, VE3TG
Guy A Costanzo, VA7GAC
K James Couprie, VE6IG
Donald Courcy, VE2CW
David Coutts, VE3KLX
Robert Cove, VO1REC
Paul C Cragg, VE3AXT
Ron Cross, VA3WWE
Francois Daigneault, VE2AAY
Renze Dam, VE6DC
Rick Danby, VE3BK
Frank Davis, VO1HP
James Dean, VE3IQ
Julio Cesar Diaz, VA3JCL
D Howard Dickson, VE1DHD
George S Duffield, VE3WKJ
Tim Ellam, VE6SH
Darayus J Engineer, VA3AHI
Edward Evanko, VE4EDE
David Evans, VE6DXX
Russell Farrell, VE3ELL
Richard Ferch, VE3KI
Terry Finn, VE6TF
James W Fisher, VE1JF
Ken James Fitzgerald, VA3KJF
Tony C Fonseca, VE7ACF
Bonna-Faye Forsyth, VE7BFF
James Forsyth, VA7FJE
L C Fowler, VE3NPC
Richard Francis, VE3OXX
Edward J Frazer, VE7EF
Mario Gasparovic, VE3HVY
David Gerrard, VE3VID
Gordon Gibson, VE3NQK
Paul Giffin, VE7IPM
John Gilje, VE6KJG
Dave Gillis, VE7BX
Bill Gipps, VE7ISV
Thomas Godden, VE3TWG
Michael Goncz, VE3WCQ
Mitchell Goodjohn, VE6SM
Robert Goodman, VE3ZRG
Dave Goodwin, VO1AU
George W Gorsline, VE3YV
Richard Govoni, VE3SHL
Gregory A Grant, VA7GRA
Scott Gregory, VA3NMI
Ron Griese, VE3RJG
Reg Gulliford, VE3AWN
Tom Haavisto, VE3CX
D A (Sandy) Haggart, VE3HAZ
Kelvin Hall, VA7KPH
David W Hamilton, VE6DWH
Gordon Hamilton, VE7ON
Don Hamilton, VA7GL
Karl Hamilton, VE3RRP
Garry Hammond, VE3GHP
Garry V Hammond, VE3XN
Richard Hanishewski, VE5RH
Jean-Guy Hardy, VE3YOS
Brad Harris, VE3MXJ
Sheldon Hartling, VE1GPY
Kevin Hastings, VA3PSL
Derek Hay, VE4HAY
Margaret Heaslip, VE3EQE
Peter Hebb, VE1SM
Jean Paul Henault, VE2JHP
Peter W Henry, VA3PWH
Doug Henry, VE4TG
Howard Hepburn, VE6GT
John Hewitt, VE3PUX
William Hicks, VA6RQ
Dallas Edward Hinton, VE7FKH
Peter K Hodgson, VA3PKH
David Hodson, VA3UL
G Bruce Hollett, VE1MLW
Henry Charles Hollinger, VA6HBY
John Hood, VE3VJH
Clare Hopkins, VE7IBK
Joseph Hopkins, VE7BYF
David Hopkinson, VA7FTW
Gabor Horvath, VE7DXG
Mark Alexander Humenyk, VE3HMK
A Graham Ide, VE3BYT
Lorne S Jackson, VE3CXT
Brian Janzen, VE7CTH
Aaren Jensen, VA7AEJ
Gordon Jewsbury, VE4OK
Dave Johnson, VE7VR
Walter D Johnston, VE3GE
Sam Jones, VE3LCK
Janet Jubb, VE6VED
Beckett Jubb, VE6JUB
W J Karle, VE4KZ
Eric Kehler, VE7EGK
Thomas V Kennedy, VA3TVK
E Kenward, VE7BYK
Stephen Kern, VE7HSK
Stephen Kerridge, VE9HZ
Kelly Kienleitner, VE7KQW
Melvin Killens, VE3MLK
Robert Neil King, VA7DX
David Kingsland, VE3MDX
Bill Kirby, VO1BB
David Klatt, VE5GN
Walter Kohler, VE7SM
Boris W Kohut, VE4BG
Gordon R Kosmenko, VE6SV
Jerry P Krayco, VE7NX
David LaHay, VE7FVW
Benoit Laprade, VE2LSF
Harvey A A Larabee, VA3LHA
Doug Leach, VE3XK
John C Lediett, VE3FVC
Syd Lennox, VE3CQO
Allan E Lett, VE3TYT
Joel Levis, VE3CJJ

continued / continué ...

RAC CORPORATE MEMBERS / ADHÉSION À CORPORATIF DE RAC

Durham Radio SALES & SERVICE INC.

www.Radioworld.ca

YouKits®

David Liddell, VE7QR
Gene R Lutes, VE7IMP
Rand Lutman, VE7HRA
Glenn MacDonell, VE3XRA
Ian MacFarquhar, VE9IM
John MacKay, VE7EEX
R K Mackenzie, VA3RKM
Neil Macklem, VE3SST
Mark Magner, VE3CT
Pierre Mainville, VA3PM
Alan Mallett, VA7AWM
Eric G Manning, VA7DZ
Tom Martens, VE6TRM
Greg Mason, VE4AMN
Gabriel Mazzeo, VA3CWT
Philip Alexander McBride, VA3QR
Don McCallan, VA3GFD
Duncan A McCansh, VE3OM
Bernard McCoy, VE6HFD
Arthur McDougall, VE1CFU
David McKinlay, VA3IR
L David McLennon, VO1LM
Malcolm R McLeod, VE5ZG
Chris McMullan, VA3CMJ
Donald McPhee, VE3REO
Doug Mercer, VO1DTM
Eric Mills, VE1AST
Micheal Misiwich, VA6MIS
Lenard Moen Sr, VA3HBR
Ed Morgan, VE3GX
George Morgan, VE3GM
Byron Morse, VA3BMO
Bob Morton, VE3BFM
Hammond Museum of Radio, VE3BJ
Mike Myers, VA3MPM
Garry Naylor, VE6FGN
A L Nelson, VE7WC
Jim Nelson, VE6ACR
Patricia Nordin, VE3RPP
Brett North, VO1BBN
Richard Novek, VE7RNZ
Kevin Patrick O'Toole, VE6GUN
R Oakenfold, VE5RO
Stephen Olesen, VE6SLP
Sheldon H Olmstead, VE3XI
Keith D Olson, VE4VO
Jean Ouellette, VE3OKK
Dennis Paganin, VA3DTP
Bill Parker, VE1VP
Joseph G Parkinson, VE3JG
G Passmore, VA7GAP
Colin Pavey, VA3FP
Geddie Pawlowski, VE3CJX
Tim Pekkonen, VE3UO
Steve Pengelly, VE3STV
Mark A Perren, VE6IHS

WELCOME NEW RAC MEMBERS!
BIENVENUE NOUVEAUX MEMBRES DE RAC!

We wish to welcome the following new members of Radio Amateurs of Canada for June and July.
Nous souhaitons la bienvenue aux nouveaux membres suivants de Radio Amateurs du Canada pour juin et juillet.

Thomas Marshall Alldread, VA7TA
Keith Beardsley, VE3SVQ
Jonathan Lawrence Bennett, VE6NFL
Conrad Rongvald Berger, VE5CON
Wayne L Bignell, VA7WB
Stephen George Bjarnason, VE6CGH
Joe Bowser, VA7JBO
Dorothy Brown, VA7DBR
Julius Buski, VA6JSB
Barry Cherneske, VA6MIA
Robert Fredrick Clift, VE7OCQ
Mark Coady, VE3LJQ
Paul Czarwin Libiran Copio, VE4TSY
George Copley, VA7PRS
Jennings Cullen, VE6FLF
Pat Duffin
Andrew Eales, VE3VKT
Brian Alexander Elliott
Garry I Frankel, VE4VD
André Gagné, VA2AGW

John TW Gray, VA7JGG
Alan Donald Haines, VE3NYV
David Charles Haw, VA3TRK
Jack Donald Hill
Dakota Michael Hourie, VA6DAH
Richard Frank Howes, VE7RFH
William Francis Jackson, VA6BLL
Ivan Stanley Jewell, VE6IVN
Robert William Kelland, VA2BIG
Michael Kovacich, VE3CKO
Krista Lambier
Cheryl Faye Lauder
John Paul Lauder
Scott Lightfoot, VE4STL
Kenneth William Long, VE7JU
Paul Owen Markwick, VE3CMX
William McDowell, VE3JKN
Ryan McKinney, VA6WHO
Marilyn Moore, VO1MJM
Robbie Joseph Morrison, VE3ZZR
Carl Frederick Olsen, VE7ATU
Jack A M Peters, VA4PNO

Nathan Donald Picklyk, VE7NDP
Eniko Pittner, VA3ENI
Zoltan Pittner, VA3ZLT
Brian Richards, VE3IBZ
Lionel Robin, VA5LAR
Paul Rockwood, VE3EEI
Cory Rushford, VE6CYT
Clayton Anthony Schnurr, VE7PQ
Nicholas Schroepfer, VE7ZEC
Athanasios Seliotis, VE3TSK
Wade Gordon Smith, VE9WGS
Wayne E Snow
Martin Southcott, VA3MRS
Herbert Ian Sparling, VE3ZIS
Kristine Rey Ann C. Sy, VE4ASY
William Van de Ligt, VA7WEV
Carolann Van De Ligt, VA7CCV
Mark Vrkljan, VA3VRK
David Thomas Wagner, VE7BH
Brian Watts, VE7EWB
Gordon Wilkins, VA3WWC

Brent Petersen, VE9EX
Murray K Pierce, VE3IFP
Robert W Piggott, VE7CYU
Dale Pilsworth, VE6DAP
Gary Pollock, VA3GMP
Harold J Porter, VO1JA
Terry Potts, VE3TEP
Everett Price, VO1DK
Byron Pulsifer, VE9BUB
Eric Quiring, VE5HG
Devon Racicot, VE5DWR
Marty Raine, VE1AE
Norm Rashleigh, VE3LC
Bryan Rawlings, VE3QN
Steve Regan, VA3MGY
Gilles Renucci, VE2TZT
Earl Richardet, VE7QJ
James H Richardson, VA3JHR
Dennis G Ritchie, VE3DXZ
Jeff Robbins, VE3JTR
Bernie Roche, VE3OTR
Peter Rogers, VE3ETR
Bruce Roney, VE3BER
Donlad Rowed, VE3KII
Gerry Saelens, VE7DCW
Edward Samborski, VE3TAS
Patrick Sandi, VE7SDI
Brian Sayer, VA6BCS

Bill Scholey, VE7QC
John D Scott, VE1JS
Ellis Seddon, VE4AJO
Kieran Shepherd, VA3KS
Robert A Shkuratoff, VA7DIV
George B Simpson, VE6HX
Gary W Skett, VE7AS
William E W Skuta, VA3WEW
Robert A Smith, VE3RSG
Major Ian Snow, VA3QT
Dave Snydal, VE4XN
John Sobkowicz, VA6GEO
Margaret Somerleigh, VE3OWL
Mark Spencer, VE7AFZ
Harry H Splett, VE3HHS
Noel T St-Amand, VE3TSA
Alan Steele, VA3STL
Al Stephens, VE3NXP
Jeff Stewart, VA3WXM
Jack Summers, VE3XR
Hiroshi Takahashi, VA7LET
Ann Tekatch, VA3NOE
Alan Thoren, VE4YZ
Jason Timmis, VE7AG
Yori Tsuji, VE4ACX
Ian Graham Turnbull, VE7TGI
W L Underwood, VE1WLU
Bill Unger, VE3XT

Henry Urbanowicz, VE3OEO
Ronald Vadeboncoeur, VE3REV
A E Vaillancourt, VE3DPZ
Hudson C Vallieres, VE9HCV
Todd Van Norman, VE7GBO
Bernie Van Tighem, VE7BVT
Robert Vanderminnen, VA3RMV
Marinus Vanderminnen, VA6OPA
Sanjay Vig, VA2OP
J M A Vigneault, VE3VIG
Ron Vollick, VE3GGX
Andrew Webb, VE6EN
Albert Morris Webber, VE4AMW
Joel Weder, VE6EI
Garth Wetherall, VE3YC
Peter Wetton, VA3PRW
Barry L Wielgoz, VE5HA
Chris K Wiesner, VA3SM
Brice Wightman, VE3EDR
James A Wilkins, VE7UVL
Brian Williams, VE3KNE
Ken Williams, VE9KW
Harold H Wirth, VA3HHW
K Scott Wood, VE1QD
Timothy Wood, VA7TIW
Allen Wootton, VE7BQO
James E Wyse, VO1CPZ

Note: Please see page 48 for more information on the RAC Maple Leaf Operator program.

Radio Amateurs of/du Canada

- ✓ **Your** national voice, representing our interests at Industry Canada and throughout the world.
- ✓ *The Canadian Amateur* magazine, filled with news, regulatory information and articles of current interest. TCA covers topics of interest to all Radio Amateurs, both newcomers and oldtimers alike.
- ✓ The *National Outgoing QSL Bureau*, for members only!
- ✓ **And much, much more!**

- ✓ **Votre** voix nationale, qui représente nos intérêts à Industrie Canada et à travers le monde.
- ✓ *The Canadian Amateur*, rempli d'actualités, les informations sur la réglementation et des articles d'actualité. TCA couvre des sujets d'intérêt pour tous les radio amateurs, les nouveaux amateurs et grands-grands.
- ✓ Le *bureau national sortant QSL*, pour les membres seulement!
- ✓ **Et bien plus encore!**

Please enter ALL fields / S'il vous plaît remplir toutes les espaces

Name / Nom _____

Address/Adresse _____

City/Ville _____ Province _____ Postal Code Postal _____

Call sign / Indicatif _____ Phone / Télé ( ) _____

Email / Courriel _____

Family Members / Membre famille _____

PayPal VISA MasterCard

Join or renew online! www.rac.ca Inscrivez-vous en ligne!

Visa/Mastercard _____ Exp: ____/____

Signature _____

Paying by Cheque?
Paiement par chèque?

S'il vous plaît faire à l'ordre de:
Please make payable to:

Radio Amateurs of/du Canada
#217-720 Belfast Road
Ottawa, ON K1G 0Z5
613-244-4367
1-877-273-8304

Note: for more information on the benefits of becoming a Maple Leaf Operator please see page 48.

New pricing structure effective January 1, 2013:

Please add the applicable GST/HST for your province
- AB, BC, MB, SK, NT, NU, YT, QC + 5% GST
- NB, NL, ON + 13% HST
- PE + 14% HST
- NS + 15% HST

Please visit the RAC website for complete information on the pricing structure.

Just click "Join RAC" on the menu bar of the RAC website: www.rac.ca

Membership Type: Full Member

- Full – Regular (e-TCA) $48
- Full – Regular (paper TCA) $56
- Full – Limited (no TCA or e-TCA) $38
- Full – Family (e-TCA) $25
- Full – Blind (e-TCA) $25
- Full – Maple Leaf Operator (paper TCA) $100
- Full – Life (e-TCA) no charge
- Full – Life (paper TCA) $8

Membership Type: Associate Member

- Associate – Regular (e-TCA) $48
- Associate – Family (e-TCA) $25
- Associate – Blind (e-TCA) $25
- Associate – US (e-TCA) $ 48
- Associate – US (paper TCA) $90
- Associate International – (e-TCA) $48
- Associate International – (paper TCA) $130

- Associate – Libraries / Museums (paper TCA) $56
- Associate – Corporate (paper TCA) $150
- Associate – Corporate International (paper TCA) $350

FRESH ON THE AIR

– ADVENTURES FOR THE NEW AND BEGINNING HAM

Phillip Boucher, VE3BOC
E: phillipjboucher@gmail.com
www.phillipjboucher.com

A Stale Ham is Not as Tasty...

As a new Amateur Radio operator, once you get comfortable in the hobby and develop your excellent operating skills, you will eventually settle down into a more routine operating practice. You may have the radio turned on during your commute back and forth to work. You may talk on the local repeater on those nights that you have off. Maybe you like to have a quick QSO on your lunch break. Whatever it is you do in the hobby, you do it often and you do it well.

But routine operating like this eventually leads to a habit, and an avoidance of going beyond what is familiar and comfortable. After being in the hobby for a decade or two, even those who you do not QSO with on a regular basis know your routine. It's like going into a restaurant and having the server immediately bring you a coffee, a hot hamburger sandwich with fries, and a slice of cherry pie. Comfortable, familiar, and satisfying. But like that restaurant and your regular food items, there are many more things on the Amateur Radio menu that you should be trying.

We all tend to hang out on our local or club repeater talking with other Amateurs who we are familiar with.

But there are a multitude of other local repeaters out there that most of us can hit, but we never go on them. Each repeater has its own type of community atmosphere and operating practice; the users are of both a different breed of background and information. Going on a rather unfamiliar repeater and talking with Amateurs that you have never communicated with before can be a bit scary and intimidating, but it can also be fun and exciting. You will get different opinions on familiar subjects, maybe learn something new, or make a new friend. "Repeater Diversification" is a good habit to get into.

We also tend to stick to bands that are familiar and comfortable. Some stay on HF, some only communicate on two metres, others may simply hang out on UHF repeaters exclusively. Once again, it is comfort and familiarity, though some Amateurs are regulated to only one band due to being in an area that does not have more than one repeater to access, or from only having a single band radio. But that does not mean that you should stay on one band if you have a multiband radio and repeaters on two or more bands in your area.

If you have a multiband radio, you can operate on VHF, UHF and/or other bands your radio has access to. All it takes is two or more operators on a simplex frequency on a band we don't use much – such as 146, 440 or 222 MHz – to keep us from becoming creatures of habit. There's another thing. Get off the repeater and operate simplex for a change. You might be surprised how much you may like it. Try a UHF repeater if you use a VHF one. And vice versa.

One thing you might hear on repeaters, local or through Internet linking protocols, is the "net". These are scheduled on-air meetings of Amateurs for specific purposes, on-air club meetings, or just for the camaraderie our hobby enjoys. There are CanWarn nets, ARES nets, Old Guys with Green Cars and Wooden Legs nets, city or community specific nets, Women only nets, Under 18 nets, Club nets, well, you name it and there might a net for it. Your local repeater may have a net that you might be interested in, whether it is for a specific topic, club net, or just as a weekly on air get-together. Most nets are formal with a Net Controller who requests checkins from specific areas or regions or with specific traffic, then requests checkins from net listeners.

And nets can be quite fun to listen to. For instance, one year on New Year's Eve a local club repeater, in a city I was in, was connected to a hub and several other repeaters around the world, for an international New Year's Eve Celebration Net. The controller was a fellow in Britain who was in London for the New Year's festivities. Come midnight local London time, he "broadcast" the countdown to the ringing of Big Ben. It was exciting to participate, via Amateur Radio, in being in a far-off city listening to an iconic structure ring in the New Year.

But don't just listen. Participate. Even if you just answer, "Hi, VE3BOC, Phil, from Barrie, no traffic, just listening to the net. I'll let you get back, 73 everyone. VE3BOC." All you have to do is check in. You don't have to have anything to say other than hi, I'm here, just listening in, thanks, bye. At least you participated in the net. So if you come upon a net during one of your evening strolls through the Amateur bands, stop, listen and check in.

We Amateurs tend to like routine, familiarity, and comfort. But as a new Amateur, you really shouldn't get into a deep and dirty comfort zone. Try to diversify your operating habits and practices. Go with the unfamiliar, the uncomfortable. Do new things, experiment, get out of your Amateur Radio comfort zone. Don't let your hobby habits become stale. Because like real ham, stale does not taste as good as fresh and new.

Transmission Tidbit:

Observational Trivia – Next time you pull into a coffee shop or mall where one or more police vehicles are parked, keep your eye out for the suspicious person peering into the police cars' interiors. This person is not a criminal. This person is an Amateur Radio operator checking out the police radio equipment!

I would love to hear from our new female and very young Amateurs on your first impressions of the hobby, both positive and negative. Write me via the magazine; email me at phillipjboucher@gmail.com, or via my website at: http://www.phillipjboucher.com.

INTERNATIONAL SPACE STATION COMMANDER CHRIS HADFIELD COVERS CANADA!

Maurice-André Vigneault, VE3VIG

It's not a Hollywood scenario, but a Canadian reality that has marked the ARISS program during NASA's Expedition #34/35 to space. International Space Station (ISS)Commander Chris Hadfield, the first Canadian to command the ISS, accomplished a feat never done before: connecting Canadian students from coast to coast to coast from space via Amateur Radio. And it could not be done without the enthusiasm and the generosity of the Canadian Commander with regards to Amateur Radio in space and Youth Education here on Earth.

What follows is but an insight into the work that was required to complete the mission. Local Amateur Radio Clubs, School Staff, Teachers and Coordinators all provided a major effort to complete this outstanding project in their regions. Part 1 was provided in the July-August 2013 TCA. Here is Part 2...

MILTON, ONTARIO, #820 CHRIS HADFIELD AIR CADET SQUADRON

Now, this was a very special contact for Chris Hadfield. The Milton Air Cadet Squadron was where he cut his wings on gliders.

Chris was impressed by Space at 9 years old while watching the first landing of a man on the Moon – and he never let go of his dream.

The 820 Royal Canadian Air Cadets Squadron is a youth organization with a mandate to foster interest in Aviation.

Commander Hadfield was a Cadet in this unit when he was a youth and the squadron was subsequently renamed after him. Currently, several Cadets have an interest in Space, Engineering, Aviation Technology and Pilot programs.

Captain Parker of the Milton RCACS put in a request for an ARISS contact, but we really had to do some fancy skating and squeezing to accommodate this one due to Chris' tight schedule.

The Cadet Squadron got their chance on April 6. The Cadets usually met on weeknights but the astronauts are already asleep at that time so the contact was scheduled for a Saturday.

The Peel Amateur Radio Club was very enthusiastic about helping out with the event. The contact was via telebridge and the relay station was handled by Luis, LU8YY, in Argentina. The coordinator at Milton was Richard, VA3RMU, of the ARES group, with the help of Glenn, VE3CEZ.

ALBERTA

The next four contacts were all via telebridge, thanks to Claudio, IK1SLD, in Italy.

The next contact with the ISS took place on April 9 at Sir George Simpson Public School, which is a Junior High located in the City of St Albert, Alberta.

They have approximately 550 students enrolled in a variety of programs including: English; French Immersion; Academic Challenge; Learning Assistance; Opportunity, Knowledge and Employability; and Behaviour Improvement.

While learning in their respective programs, all students are invited to rally around the school motto "Spirit, Growth, Success" in both thought and action.

The school offers many extracurricular activities such as Social Justice, Cheerleading, Art Club and their SABLE high altitude balloon club.

In Alberta, the Grade 9 Science curriculum includes a unit entitled Space Exploration which is meant to: identify problems in developing technologies for space exploration; describe technologies developed for life in space; and explain the scientific principles involved.

Projects include: exercise plan for astronauts while in orbit; nutritional requirements for long-term missions; bone density and the impact of a Zero G environment; ideas to reduce the potential damage caused by space junk; and the psychological considerations of multi-month missions.

Over the past three years their SABLE high altitude balloon missions (using Amateur Radio) have generated a high degree of media coverage. As a result, they have developed strong, positive relationships with their regional media outlets.

The coordinating operator of the contact with the ISS was Tony, VE6TNY. It was very interesting because of its multilanguage questions. Half of them were in English and half were in French. In addition, one question was in Russian. Astronauts who are called to fly the *Soyuz* spacecraft take their training at the Russian Space Centre where all the instructions are in Russian. Therefore, yes, Chris Hadfield is fluent in Russian. The contact was streamed to all the classrooms in the school.

NUNAVIK/QUEBEC

Inukjuak is a remote, fly-in Inuit community located on Hudson Bay in Northern Quebec. Its population is approximately 1,600. The Inuit of Inukjuak still partake in many cultural practices such as constructing sleds or harpoons, sewing traditional garments, training dogsled teams, hunting, fishing and berry picking. However, they also have a window into the modern world and are current on fashion trends, popular music, and breakout phenomena like "Gangnam Style".

The primary language in the school and in the village is Inuktitut; English and French are secondary languages.

April 12 was selected for their contact.

The Innalik School in Inukjuak has over 200 students. Prior to the radio contact with the ISS, a "Space Club" was formed and the following activities took place: Teaching students about the ISS via video, Internet, guest speakers; Training the students on correct radio usage/protocol and related Amateur Radio science including antennas and radio setup for ARISS contacts; Nova live tracking of the ISS, and students plotting the course of the ISS; Completing projects to be displayed in the gym "Mission Control" e.g., mobiles, posters, banners, murals; Training and preparation of students in conducting themselves in front of media; and a school-wide contest to create a mission patch to be displayed on T-shirts worn by the school population.

The contact was conducted in English, French and Inuktitut with translation. Six questions were in French including:

"Croyez-vous dans l'existence des extraterrestres?"

This ARISS project was sponsored by the Makivik Corporation and by First Air represented by Ron Ralph. These are the sponsors that ensure that ARISS contacts in Northern Canada are supported. Without organizations like these, projects of this type would not happen in these remote areas. We are grateful they are on board. Lori and Steve McFarlane, VE3TBD, flew First Air to Inukjuak and were the coordinators for the contact.

THE NATION'S CAPITAL

Although we've already been to Ontario, we had to make a contact from Ottawa, the Nation's Capital. The school selected was John McCrae Secondary School on April 17. Our Ottawa Ops Team was busy travelling to other sites and their schedule did not allow a direct contact so Claudio in Italy did us a favour once again.

John McCrae Secondary School is named after the Canadian poet and doctor who, during World War I, wrote the famous war memorial poem "In Flanders Fields".

With this heritage in mind, the school hosts large community Remembrance Day ceremonies every November 11 and celebrates community works of art in the "Red Poppy" gallery.

John McCrae students consistently rank among the best academic performers in the province, gaining post secondary acceptance across North America and winning many entrance scholarships. Their specialty High Performance Athlete program attracts some of the best young athletes in Ottawa and they have contributed to several recent provincial championships.

I personally attended this contact and witnessed a large group of students and teachers highly attentive to the contact.

Steve and Lori coordinated the event and the highlight of the presentation, prior to the contact, was the demonstration of a dancing robot with movements coordinated to music through a computer.

The contact went well and I had a chance to see the Chris Hadfield poster with all the signatures. It was interesting to note that, prominently placed on the poster, some Inuit inscriptions in the Inuktitut language popped out of the poster. The poster was packed up for onward delivery to the Yukon, our next stop.

THE YUKON

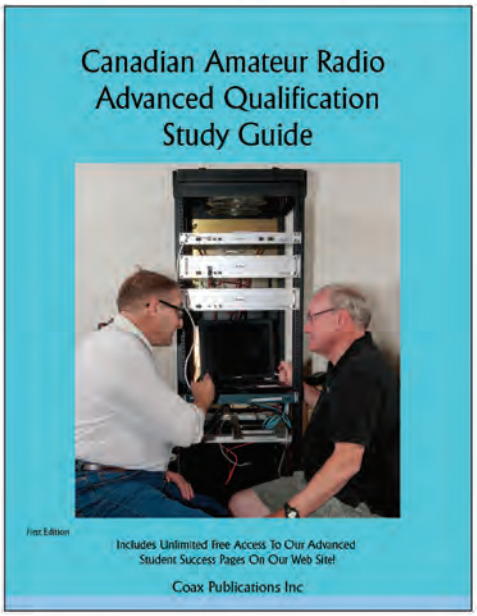
Grey Mountain Primary School, located in Whitehorse, is the only primary school in the Yukon. This was a first for the Territory and their educational system as well as for ARISS and the excitement was running high in anticipation of the event.

Keir Hyde, the teacher spearheading this project, said at the outset:

"We are extremely excited by the opportunity that this project can provide for our students, community and the Yukon. I have dedicated the next two months of my life to make sure that this is the most awesome, educational experience that the Yukon has ever seen."

NEW FROM COAX PUBLICATIONS INC!

THE CANADIAN AMATEUR RADIO ADVANCED QUALIFICATION STUDY GUIDE



In response to many requests from our customers, this 340-page book follows the same format and teaching methods as our extremely successful Basic Qualification Study Guide.

It includes unlimited time access to our upgraded and improved *Advanced* Student Success Pages, *Advanced* Ask The Professor together with new features to help your understanding.

- ✓ All questions in the Industry Canada Advanced Qualification question bank are covered
- ✓ Additional material to provide context to each topic
- ✓ Goes far beyond the requirements of the question bank to include topics such as digital signal processing (DSP), digital filters, repeaters, networks and remote stations.
- ✓ Can be used for self-study or as the text for a class

ONLY $44.95!

ALSO AVAILABLE FROM COAX PUBLICATIONS INC!

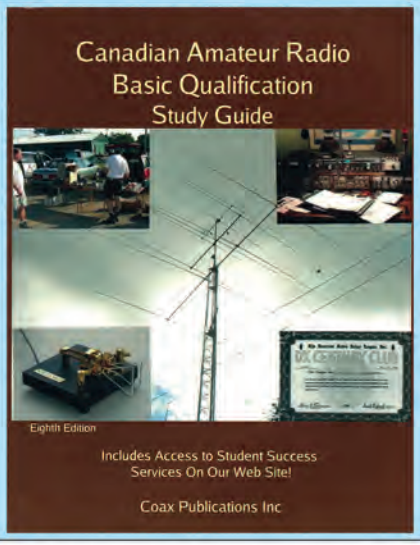
THE CANADIAN AMATEUR RADIO BASIC QUALIFICATION STUDY GUIDE

Our best selling study guide for the Basic Qualification, used by most clubs for their courses, this book is designed for both self-study and use in a classroom.

Matched to the Industry Canada question bank, covers all questions while providing context and depth of understanding. Includes unlimited time access to our Basic Student Success Pages and Basic Ask The Professor help.

STILL ONLY $44.95!

Order both Study Guides from our Secure Web Site:
http://www.coaxpublications.ca
or e-mail: coaxpublications@iliffe.ca



Coax Publications is committed to providing accurate and up to date study materials. Any new material required due to the IC question review will be provided immediately via the Student Success Pages on our web site as a free download.

COAX Publications

This contact opportunity sparked a frenzy of space-related themes and ideas throughout their school and has inspired their community. Their small school was transformed into a space education station with student-created learning displays and artwork throughout. The kids were reading and writing using space to inspire imaginations and incorporating space exploration into math and science lessons. They even had a local artist build a life-size *Soyuz* spacecraft out of recycled materials. Everyone involved were on pins and needles.

The contact happened timely at the end of the Yukon Territory-wide Education Week on April 20. The Yukon Amateur Radio Association coordinated the contact under the guidance of Ron, VY1RM. This was a telebridge contact relayed by Claudio in Italy.

NUNAVUT

On April 25, an ARISS contact was set up at the Maani Ulujuk Ilinniarvik (MUI) School located in Rankin Inlet on the northwest side of Hudson Bay.

Rankin Inlet has a population of approximately 3,000. MUI is one of three schools in the Rankin Inlet system and it hosts Grades 7 to 12. It was named after an Elder (Maani Ulujuk), who was the oldest elder in the community. The school takes in 353 students.

Even though they don't have a space club, they have a vibrant Science program which hosts a Science Fair annually and students have been exposed to the space program in the curriculum. This school had a long waiting period due to the cancellation of the contact last year so students and staff were very pleased to complete the contact this year – with Chris Hadfield as a bonus. The contact (shown in the above photo) was via telebridge by Claudio in Italy.

RETURN TO QUEBEC

On April 29, we were in Thetford Mines at the Polyvalente de Black Lake (shown above(+) for a contact between NA1SS and VA2VDL. This call sign belongs to Vanessa Leblond-Drolet who organized an ARISS contact in November 2011 for the A.S. Johnson High School when she was only 14 years old, the youngest person to have done so for ARISS (see the cover of the January-February 2012 TCA).

The Black Lake School has an elementary school with Grades 5 and 6, a secondary school, and a professional centre for students who want to complete a DEP in esthetics. They have an intensified English program for Grades 5 and 6 and it continues all through the secondary level.

Vanessa and her team of local Amateurs from the Thetford Mines Club – headed by her father Luc, VE2LUQ – set it all up again and they had a successful contact.

Vanessa studies in Science and I can easily see her at the Canadian Space Agency training to become an astronaut later on.

NORTHWEST TERRITORIES

Hay River, NWT

On May 3, we were in the Northwest Territories for a contact from the Diamond Jeness Secondary School in Hay River, across Great Slave Lake from Yellowknife.

The attendance at the contact was approximately 300 and it included students from the local primary school as well. The contact was a telebridge between NA1SS and VK4KHZ and it was audible over central Australia. Shane in Queensland, Australia was the relay operator.

Our Ottawa Ops Team attended the contact thanks to Buffalo Airways who provided transportation for Steve, Lori and Claude, our audio and video specialist. The contact was a big success (see the photo below).

The television series Ice Pilots by Omni Productions was on location and Buffalo Airways noted personality, Mikey, got to ask a question to Commander Hadfield. Buffalo Airways helped sponsor the contact and make it happen. Watch the Ice Pilots first episode in the fall, you might see the Hay River contact.

Yellowknife, NWT

Our last contact was to be a special event for the community of Yellowknife. It was to take place on May 11, just before the return of Commander Hadfield to Earth on May 13. It was on a Saturday and Chris had once again made himself available.

As if all these contacts were not enough to show his dedication to youth, this last gesture proved it even more.

On the same day Chris was to make contact with Yellowknife, the ISS crew had to make an emergency repair on the outside of the Space Station, necessitating an Extravehicular Activity (EVA) by two astronauts. Obviously, the contact could not take place.

On Sunday, May 12, Chris was scheduled to hand over the ISS to its new Commander and pack his bag for his return to Earth the following day.

Nevertheless, he called for an attempt at the Yellowknife contact.

He would do anything not to disappoint any youth expecting his call. He did it before for SickKids Hospital and now he did it for the people of Yellowknife. What an impressive record!

The contact took place at the RCMP Headquarters and it was coordinated by local Amateur, Samuel Saunders, VE8SS, and assisted by our West Coast mentor, Brian, VE6JBJ, and Sergeant Grant Payne and Corporal Barry Ledoux from the Yellowknife RCMP Detachment.

For this community event, there were a number of things that differed from the usual lineup of students.

They included questions from a number of different groups: schoolchildren; a First Nations Aboriginal Elder; a High School Exchange student (from Portugal); a child from an After School Program; and a community member.

After a short introductory video that briefly described the mission and Chris Hadfield's background, they had the Elder bless the event/mission with a traditional ceremony and prayer prior to the contact.

The contact was a telebridge/phonepatch relayed by the ISS Amateur Radio Club K6DUE in Maryland and I was able to monitor Chris' responses at the VE3JW station since the ISS footprint included Ottawa at that time.

After 20 questions were answered by Chris, the attendance broke into loud cheers and farewells. Then the media was provided with an opportunity to interview anyone of interest and there followed a reception for everyone in attendance.

CONCLUSION

Upon his return to Earth, Commander Hadfield has been invited to speak to students of many of the schools that have completed an ARISS contact during NASA's Expedition 34/35.

The number of Canadian events/schools totalled 18 and covered all the provinces and territories. Three of these were in Ontario and three were in Quebec as they have the most schools located in their province.

These events required our volunteer mentors, who coordinated them, to travel to different locations in order to ensure a successful outcome.

Our East Coast coordinator, Wayne Harasimovitch, VE1WPH, mentored five school contacts and attended two of them in person including our celebrated first contact in Bedford, Nova Scotia.

Our West Coast coordinator, Brian Jackson, VE6JBJ, sums it up for all of us:

"As much as it has been very busy and a lot of work, it has been great to connect him to so many students and help build the excitement for ARISS and space exploration. For me, there is nothing better than this."

Brian mentored four school contacts and he travelled to RCMP HQ in Yellowknife, NWT, for our last contact.

Our Operations Team and mentor in Ottawa, Steve, VE3TBD, personally attended six school contacts, travelling to our northern and central Canada sites, assisted by his wife Lori who guided the students during the contacts. Steve also mentored two other contacts at a distance.

Local groups provided other volunteer contributors to these events, which are too numerous to list here, and we thank them all.

I want to make a special mention of Claude Lacasse, our audio and video specialist from our Ottawa Ops Team who prepared outstanding presentations for these events and participated onsite at six events, travelling to Toronto, Inukjuak, Rankin Inlet and Hay River.

A tip of the hat goes to First Air, Air Inuit and Buffalo Airways for their support in providing transportation to northern sites. We also want to acknowledge the Makivik Corporation for making the events possible in their region.

Big thanks go to our ARISS Team members: Kenneth, N5VHO, who coordinated the contacts at the Johnson Space Center in Houston; and to Charlie, AJ9N, in California, who kept the schedule in good order.

Schools, groups and crews are very grateful to Chris Hadfield for his interest in the ARISS program. Chris will be presented with the signed poster at an opportune moment that has not yet been determined as of this writing.

Maurice-André Vigneault, VE3VIG AMSAT Canada Delegate ARISS International Working Group and School Selection Committee ve3vig@amsat.org

The author is a retired Air Force Captain who started as a radio operator and gravitated all the echelons of the ground electronics trades, comm tech, radar tech, navaids tech, before being commissioned. After retirement, he joined the Amateur Radio community and participated and conducted many radio special events. He managed the VE3JW Amateur Radio Exhibit Station in Ottawa for 12 years, renovating it to include all the facets of our hobby, including satellite communications. In 2009, he was asked to be the AMSAT Canada Delegate on the ARISS International Working Group and he took on the additional responsibility of Canada Representative on the ARISS School Selection Committee.

Val Lemko, VE5ACJ
1125 Iroquois St. W.
Moose Jaw,
Saskatchewan
S6H 5C1
E: ve5aq@sasktel.net

YL NEWS AND VIEWS

OUR YL PROFILE: CAROLE HAMEL, VA2NDJ

Hello everyone.

First off, my thanks to Alan for giving me a one-issue break; that is a very thoughtful gift and it sure did help while trying to get a garden planted and the camper packed. Thanks again Alan.

I hope you all had a wonderful summer.

My OM and I had a lovely summer, camping, visiting family, and then of course the "let's check and make sure that the antennas are ok", because who really wants to go up on the roof when it is -35C?

It seems like just yesterday we finally finished with winter and now it is looming once again. Maybe with some luck we will have a lovely long fall, and the snow won't show up until December – we can dream.

This next YL I am going to talk about was suggested by Ann Nutter, VA3HAI. Ann met this young lady at Hamtalk 2012. Ann told me how busy this gal is and so I just had to get hold of her.

This YL comes from La Belle Province. Her name is Carole Hamel, VA2NDJ.

First off, Carole is not your typical radio operator. In fact, in 2010 she did not have a clue as to what Amateur Radio operators were. This quiet gal decided that it was time to go out and meet someone and, being in the modern age, she decided to try her hand at online dating. Anyways, she met this fella and they ended up talking quite a bit at first online and later on the phone. She finally decided that he sounded like a decent guy and said yes, she would go out with him on a date, little knowing what the future had in store for her.

Carole's two sons were watching out the window on that March day, waiting to see who was coming up the driveway to meet their mother. They saw a red truck, backing up in the driveway, and it had five antennas on the roof and really looked like a porcupine. Now Carole was wondering just what the heck she had gotten herself into.

Her date got out of his truck, said his name was Normand or Norm for short. He was anything but short compared to her. His big brown eyes and friendly smile was all she needed for a great Easter weekend. She thought that was the end of it, but to her surprise Norm decided that he needed a partner to help him in his passion of Amateur Radio and really decided that Carole was the perfect gal for him.

Carole then started to really find out that Norm Pitre, VE2NHK, is all about Amateur Radio, emergency communication (he is RAC's Section Emergency Coordinator for Quebec), trucks, old cars, music and movies. Carole had all the same passions except for ham radio. She loved the fact that she shared his interest in old cars. She had worked with her dad at car shows, and she also she worked at Ford for three years in the garage fixing and restoring old cars. But as much as Norm loves cars, his favourite activity is Amateur Radio. She soon learned that if you can't beat them, you had better join then.

Norm was and is her Elmer. Norm had told her everything he did at all the events he went to, and how we can use Amateur Radio. Carole started looking on the Internet, studying and learning without letting Norm know that she was getting interested in Amateur Radio, until one day she decided she wanted her own call sign. Almost two years to the day she first met Norm, Carole became an Amateur Radio operator. Then the fun began.

Since being with Norm, Carole has attended Ski Marathons, Halloween Patrols, Santa Claus Parades and she has been to several hamfests.

Just after she was certified, Carole and Norm went down to Lake Placid, New York for the Iron Man Competition. Norm, having 13 years of this under his belt, told his lovely Carole that she

was going too. "No way," says Carole, "I would not know what to do." "Ok", she said, "I will go, and help with antennas or something, but no way am I going on the radio."

When they got to Lake Placid, Carole saw that there were over 2,200 participants. On top of that, the number of volunteers that were needed to keep everything running smoothly was overwhelming. As it turned out, Carole was put into an ambulance as the radio man (woman), Norm had to be the driver and of course there was a paramedic on board as well. In the November-December 2012 issue of TCA there is a photo of Norm, VE2NHK, coaching Carole on the proper procedure for the event. Carole's first time as a radio op at such a prestigious event was awesome as she put it. It seems Carole has quite the knack for these things. Everything went perfectly.

Now Carole is not finished yet. She is doing her part with the Quebec Secours Search and Rescue Team, part of Rochmum/Securite Civil (RAC/RAQI). She is taking several first aid courses and several other courses and she is also going for her Advanced ticket. Carole is making sure her two sons get their first aid courses and also getting their Amateur Radio certification. She says the house has one radio with a J-pole for an antenna, and of course the 2m rigs are always charged up and ready to go. Carole is also embarking on another ambition of her's to become a nurse.

As Carole says, "these past three years have been quite remarkable. I have learned a lot, met a lot of people, made new friends, and I have a new family. My call sign, VA2NDJ, is my family. N is for Norm, D is for Dany my youngest son, and J is for Julien my eldest son, the three most important men in my life."

What a great story Carole! Thank you for sharing it with our readers.

– continued on page 36

AMATEUR RADIO SATELLITES

Keith Baker, VA3KSF/KB1SF
PO Box 33
Corunna, ON N0N 1G0
E: va3ksf@rac.ca

In previous columns
I've been showing readers how to equip their stations, watch for, track and then (for those so certified and equipped) actually work through our various Amateur Radio satellites now in orbit.

In this installment, I'll be turning the spotlight on to a whole series of Amateur Radio satellites that were built, launched and controlled by our friends in Japan. One of these satellites still remains semi-operational to this day.

THE FUJI SATELLITES

The very first Japanese Amateur Radio satellite, JAS-1a (which later became Fuji-Oscar 12 on orbit) was launched on August 12, 1986 on the very first test flight of Japan's new H-I launcher developed by Japan's National Space Development Agency (NASDA).

It was part of a piggyback payload that rode into a nearly circular, 1497 X 1479 kilometre, LEO orbit along with a Japanese experimental geodetic satellite called AJASAI (EGS). The FO-12 satellite consisted of a 26-sided polyhedron (about the size and shape of a large basketball) and weighed in at about 50 kilograms.

The bulk of this article was previously published as "Spotlight on the Japanese Amateur Radio Satellites" in the August 2011 issue of Monitoring Times, Brasstown, NC 28902. Thank you MT!

FO-12 was the first Japanese Amateur satellite developed by the Japan Amateur Radio League (JARL) with system design and integration performed at Japan's National Electric Company (NEC).

Unfortunately, eclipses kept FO-12 from producing enough electricity to keep it switched on for an entire orbit and it was eventually taken out of service on November 5, 1989 because of battery failure.

JAS-1b (Fuji-Oscar 20)

Fortunately, Japanese Amateurs had a replacement satellite ready three months after FO-12 had to be turned off.

JAS-1b became the seventh Amateur Radio satellite hurled to space in 1990 and was renamed Fuji-Oscar 20 soon thereafter.

Another H-1 rocket provided by NASDA ferried the 110-pound JAS-1b to a 750-mile-high orbit on February 7, 1990. This H-1 also carried two government satellites, MOS-1b and Debut, and it marked the very first time Japan had launched more than two satellites at one time.

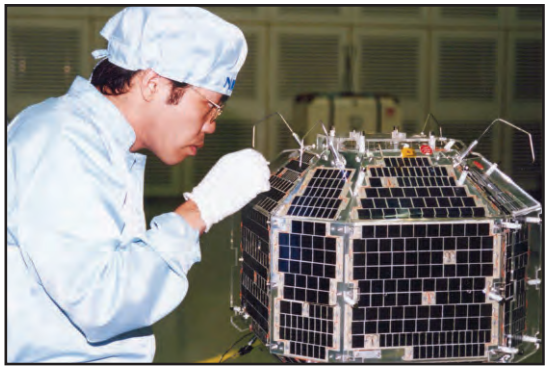
There were many positive features of FO-20. Its orbit was somewhat more elliptical than the RS satellites so it often provided a somewhat larger footprint and much larger area for potential contacts.

The Benefits of Mode J

In addition, for those who were so equipped, the 70 cm downlink of FO-20 provided many users with a way to escape the inherent man-made noise that's often present on both 10 and 2 metres.

In many areas of the world, the 2 metre band is so crowded (or filled with electrical and other noise) that it makes satellite weak signal work nearly impossible. Most of this interference is not present at 435 MHz and spectrum space is somewhat less crowded at that frequency. As a result, Mode J operation (2m up / 70 cm down) is often much preferred to Mode A or Mode B in those areas.

Unfortunately, for all of its positive aspects, FO-20 is no longer operational. However, before it went silent, our Japanese compatriots had a follow-on satellite, JAS-2, built and ready for launch.



A technician makes a final adjustment to the JAS-2 satellite prior to launch in 1996. Later re-named Fuji-Oscar 29 (FO-29) on orbit, the satellite is still "semi-operational" to this day. (Courtesy: JAMSAT)

JAS-2 (Fuji-Oscar 29)

JAS-2 was successfully launched by NASDA, from their Tanegashima Space Center in southern Japan, to become Amateur Radio's first new orbiting satellite of 1996.

Once again, JAS-2 was principally designed by a team from the Japan Amateur Radio League (JARL) and was later built almost entirely by Japan's Nippon Electric Company (NEC) under contract from JARL.

Soon after JAS-2 successfully reached orbit, JARL requested that an OSCAR number also be assigned to their handiwork by the worldwide AMSAT community. The name Fuji-OSCAR 29 (or just FO-29) was quickly given to the new satellite.

Initially, FO-29 contained both an inverting linear as well as packet radio transponder on board. FO-29 also contained a magnetic torque system to spin-stabilize the satellite in a planned attitude perpendicular to the orbit's plane.

When its Mode J linear transponder was activated soon after launch, FO-29 provided *very* strong downlink signals; much stronger, in fact, than its aging FO-20 cousin. Also, FO-29 tends to strongly favour either left-hand or right-hand circular polarization depending on how the satellite is oriented with respect to the Earth.

Besides the stabilization system, there were many other electronic improvements carried aboard FO-29. The most obvious improvement was that, in addition to a 1200 bps AX.25 packet modem and BBS system, FO-29 also sported a 9600-baud FSK transponder as well.

FO-29 FREQUENCY AND MODE DATA

Mode	Uplink (MHz)	Downlink (MHz)
SSB/CW – JA	145.900 – 146.000	435.900 – 435.800

There was also a "digitalker" on board that stored and repeated about 25 seconds of speech, uplinked from the FO-29 command station for later "broadcast" via the 435.91 MHz FM downlink. Another, less obvious improvement included the use of gallium-arsenide solar cells with a much higher (17%) efficiency than those carried on other satellites of the era.

Unfortunately, over 15 years of exposure to the harsh environment of space has taken its toll on FO-29 to the point that only the linear Mode JA transponder is "semi-operational". It's been reported that the satellite's batteries are slowly failing due to long periods of darkness in some parts of its orbit. In some cases, this has caused FO-29's ground handlers to keep the satellite completely switched off for upwards of several months at a time.

When it is operational, for those so equipped to operate in Mode V/U (the old Mode J), FO-29 is a really nice satellite. It's relatively high LEO orbit gives correspondingly longer access times. I've found it to be a real joy to work through once you get used to the rapid Doppler shift on the downlink.

As I've noted in previous columns, the best way to operate on this satellite once it pops above your horizon is to send up a few "dits" on the 2m uplink and listen for your own signal on the downlink. Then, using the "one true rule" of compensating for that shift, I tune the *downlink* (in this case the 435 MHz frequency) to compensate as Doppler shifts both the uplink and downlink frequencies. However, don't be too worried about having to move your uplink signal around in the passband to find either yourself or the station you are trying to work.

It is important to remember that "Dr. Doppler" at this frequency is quite rapid, so we all can be forgiven if we occasionally happen to inadvertently shift our uplink signals into someone else's QSO. It's one of those things that "goes with the territory" while operating on Mode J satellites. In time (and with practise) you'll soon be learning to compensate for FO-29's rapid V/U transponder Doppler shift like a "pro".

The latest on-orbit status of FO-29 is always available via the AMSAT website at http://www.amsat.org. Simply click on the "Satellite Info" link and then "Current Status" in the drop-down menu.

LOOKING AHEAD

In future columns, I'll shine the spotlight on yet another group of our Amateur Radio satellites and also bring you up-to-date on the very latest happenings in this absolutely fascinating part of our radio hobby. See you then!

RADIO ACTIVITY IN SPARTA

Submitted by Bill Bynsdorp, VE3SRH

Sparta went Radio Active on Wednesday evening April 3. The Cubs from Sparta were joined by the First Aylmer Cub pack and the 18th Cub pack from St Thomas – all from Ontario – for an evening of crafts and learning.

After a grand opening they were told that they were going to build the most powerful communication device in the world. Scouter Bill Bynsdorp, VE3SRH and Jim Platt (Baloo) put together the kits that they were going to assemble. They consisted of a board, battery, light bulb and a steel strap (key) and some wire and hardware. This allowed them to put together a device that allowed them to send a message that could only be seen from the recipient directly in front of them.

The Cubs built a telegraph receiver using a battery, a key and a light bulb. All the leaders joined the youth on the floor to assemble the kits. After the program all received the comic book "Archie" with an Amateur Radio theme, which was provided by the American Radio Relay League.

They were then introduced to Amateur Radio by the guests – Worth Chisholm, VE3BTC, Dietmar Fichter, VE3CG and Bill Park, VE3WMP – who had set up three radio stations in the basement of the Sparta Community Centre, the meeting place of the Sparta Scouting Group. They sent messages to Dave Tilley, VA3TD, in Port Stanley and Mike Lukasik, VA3MD, in St Thomas. My apologies if I have forgotten others that they contacted. They also were shown several Morse Code keys that Bill Park had brought along.

The photo shows (from left) Dietmar Fichter, VE3CG, Clark Miller (18th St Thomas), Corey Chretien (1st Aylmer) and Scott Van Haren in behind. In the background we have Worth Chisholm, VE3BTC.

The photo was taken by Jim Platt (Baloo) of the 1st Sparta Cubs.

"YL News and Views", continued from page 34

Hopefully, the bands will be much better this coming year – and yes, I do plan on getting on the radio more and I am hoping to do more CW. I will have to wait and see on that one though.

Girls, please don't forget about CLARA. We would love to have many more members. Also check out our website at http://www.clarayl.ca. See what is new, and if you have stories or pictures you would like to see on it, please send them to me at ve5aq@sasktel.net.

My thanks go out to all those of you who have emailed me with your kind comments about this column. I'm so glad you read it. We may not be the technical ones in this hobby, but we greatly appreciate all the help we get from our OMs and others that help further the cause of Amateur Radio.

33, 73, 88 or whatever the case may be... Val

All Things Digital

Amateur Radio for the 21st Century

010

Robert C. Mazur, VA3ROM
E: va3rom@gmail.com
W: http://my.tbaytel.net/va3rom

THE WEAK SIGNAL PROPAGATION REPORTER (WSPR) – PART 1

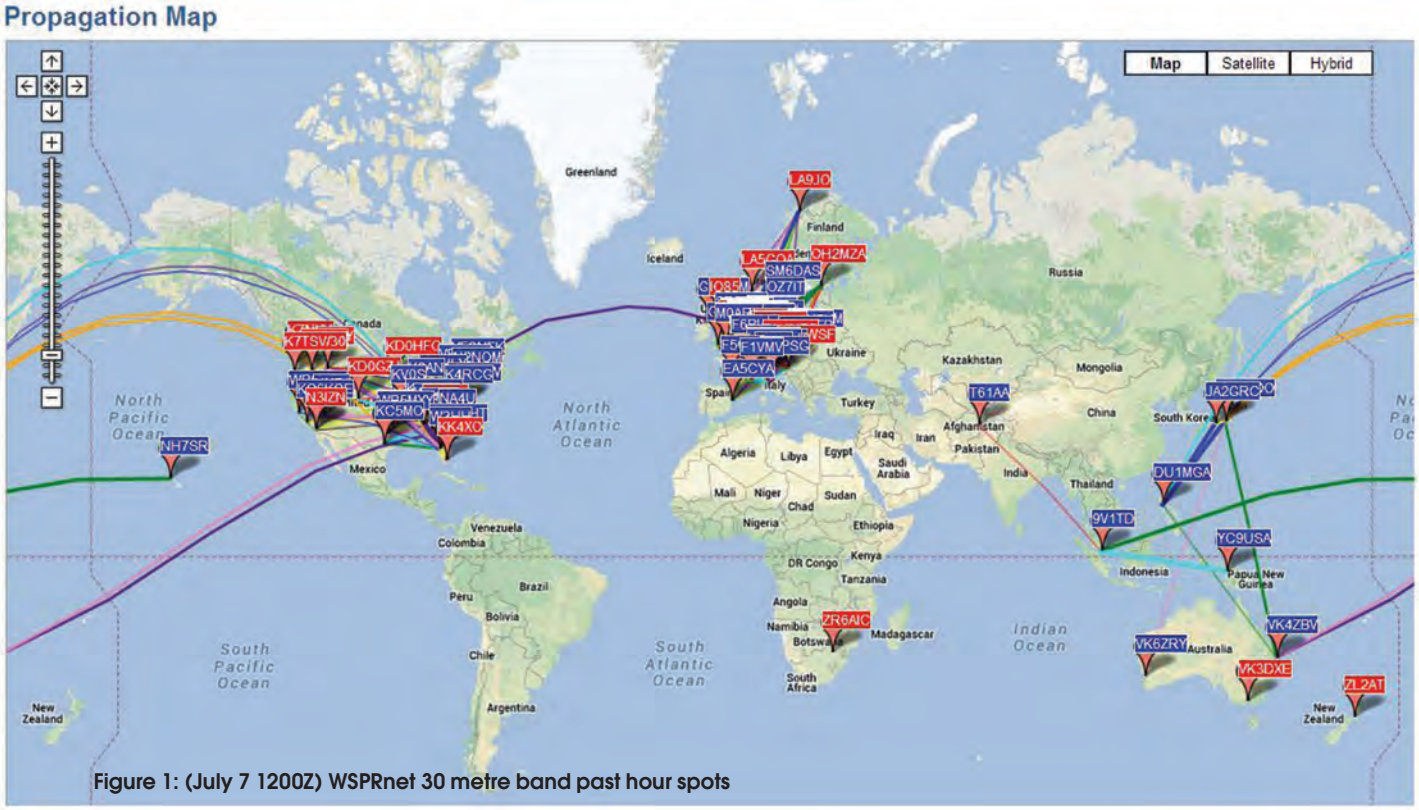


Figure 1: (July 7 1200Z) WSPRnet 30 metre band past hour spots

BACKGROUND

WSPR, pronounced "whisper", is a computer program and digital radio mode developed by Dr. Joe Taylor, K1JT, Nobel laureate (Physics, 1993), and he is also the author of the weak-signal programs/modes WJST and JT65. Digital "guru" Murray Greenman, ZL1BPU, asked Joe about adding a new, optimized mode for manned experimental propagation tests (MEPT) to WSJT, and two weeks later (March 13, 2008), Joe announced the "birth" of WSPR.

WSPR adds to the rapidly growing list of [free] digital radio modes that can do amazing things [today] that were impossible in the early 21st century. Hundreds of automated WSPR low and extremely low power (QRP and QRPp) stations transmit and/or receive signals on established worldwide frequencies (Figures 1 and 2).

You can download the program from the Princeton University website and setup and configure WSPR just like any other soundcard digital radio mode (PSK31 for example), but, and it's a bit BUT, you can't and don't use WSPR for normal two-way, chit-chat type communications. However, if you are "into" experimentation, research, statistics, digital modes, low power operation, building kits, propagation studies, or testing transmitters, receivers and antennas, or developing microcontroller (MCU) radio projects then WSPR will definitely appeal to you!

Note: All references and resources mentioned are listed at the end of this article along with their web links. I would like to thank Jay Wilson, W5OLF, for his invaluable assistance with the technical details.

Band	USB Dial	WSPR 200 Hz Window
160m	1.836600	1.838000 - 1.838200
80m	3.592600	3.594000 - 3.594200
60m	5.287200	5.288600 - 5.288800
40m	7.038600	7.040000 - 7.040200
30m	10.138700	10.140100 - 10.140300
20m	14.095600	14.097000 - 14.097200
17m	18.104600	18.106000 - 18.106200
15m	21.094600	21.096000 - 21.096200
12m	24.924600	24.926000 - 24.926200
10m	28.124600	28.126000 - 28.126200
6m	50.293000	50.294400 - 50.294600
2m	144.488500	144.489900 - 144.490100

Figure 2: WSPR Frequencies

THE TECHNICAL (BORING) "STUFF" (see Figure 3)

Note: I've rounded all values and omitted equations in Figure 3, but George Smart, M1GEO, has an easy to follow mathematical analysis of WSPR posted on his blog.

a) Message format: call sign, grid square locator, and [transmitter] power (in dBm).

b) Message bit allocation (50 bits): call sign (28), locator (15) and power (7).

c) Forward error correction (FEC): long-constraint convolution code (112 bits).

d) Total transmitted bits: 162 (values range from 0 to 3). These are the most significant bits (MSB) of a "channel symbol" packed with least significant bits (LSB) generated by a pseudo-random number sequence to provide accurate time and frequency synchronization.

e) Modulation: WSPR uses a 200 Hz wide passband "window". With soundcard based WSPR, the RF carrier is shifted up (or offset) by a continuous, user-selected, single tone between 1400-1599 Hz.

This new RF product is then modulated by continuous phase (all signals stay in phase with no breaks between), 4-tone [multiple] frequency shift keying (FSK) or MFSK-4. The level shifts (or symbols) have 1.465 Hz tone separation: symbol 0 = 0 Hz, symbol 1 = 1.465 Hz, symbol 2 = 2.93 Hz, and symbol 3 = 4.395 Hz.

f) Symbol rate: 1.465 baud (each symbol transmitted for 683 milliseconds).

g) Synchronization: 162-bit pseudo-random. One data bit (MSB) and one sync bit (LSB) are packed together and transmitted. The symbols are "unpacked" and converted back to data and sync bits and decoded at the receiving end.

h) Transmission duration: 110.6 seconds (transmission must begin within 1 second and usually no later than 2 seconds of the start of any even [UTC] minute).

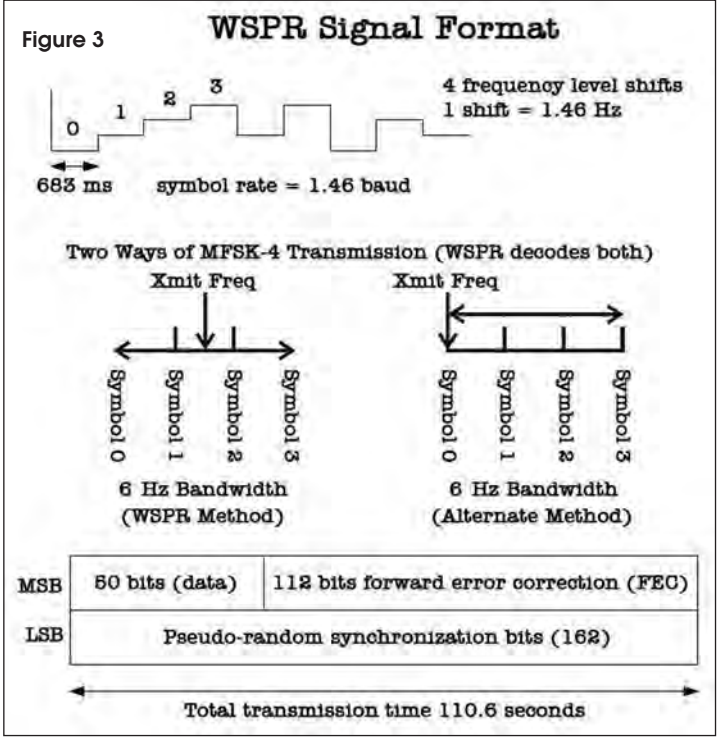
i) Bandwidth used: approximately 6 Hz.

j)Minimum reception level signal to noise ratio (SNR or S/N): -28 dB with reference to a 2500 Hz (noise) bandwidth.

With a 200 Hz passband window,
33 stations (spaced at 6 Hz intervals) can simultaneously transmit and infinity + 1 can simultaneously receive.

Normally, stations transmit 20% and listen 80% of the time (transmit for 2, listen for 8 minutes) using randomized time-sharing and this allows 165 stations to share the same WSPR window in any given 10-minute period.

Figure 3



"WSPR'ING" ON THE AIR

Dr. Taylor has written a concise WSPR user guide and I'm not going to "reinvent the wheel" by repeating it here. If you are a digital radio modes operator then you already know how to set up the software and hardware, but it doesn't hurt to read the documentation, anyway!

WSPR doesn't require a super-fast, quad-core computer or a transceiver loaded with all kinds of analog and digital filters. A single-core XP computer with an accurate clock, and a "plain-Jane", frequency stable transceiver (or receiver) will suffice; it's the program that does all the work using razor-sharp 1.5 Hz wide software decoding filters.

The 30 metre all-digital band is very popular since no contesting or high-power is allowed so it's great for digital modes experimenting, but 20 metres is still the "workhorse" WSPR band.

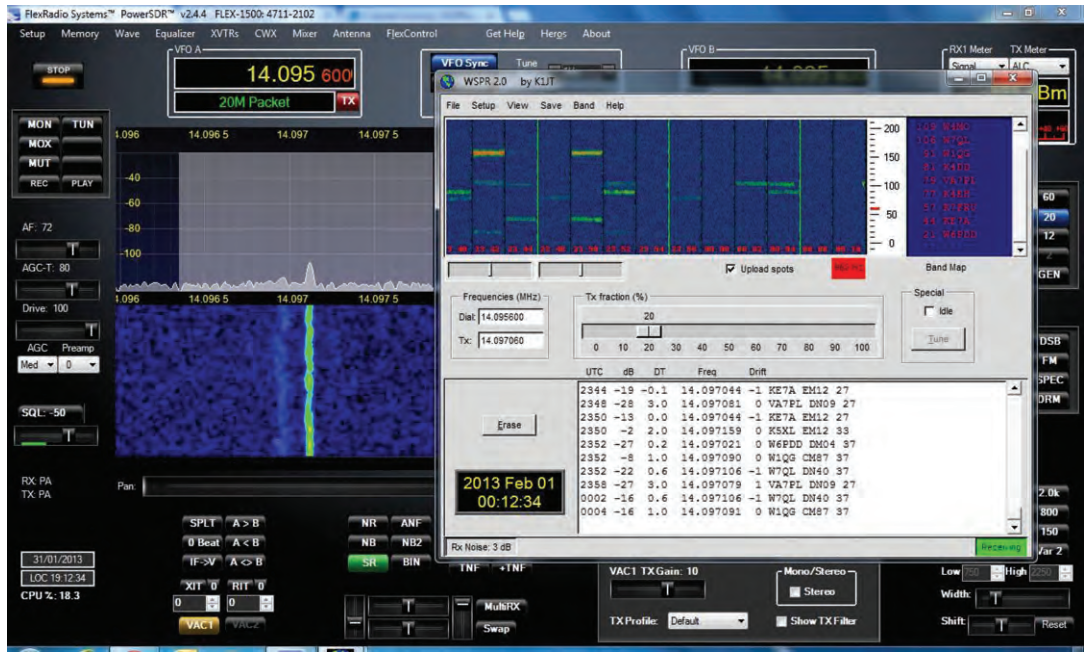


Figure 4a: FLEX-1500 PowerSDR display and WSPR decoding software on 20 metres

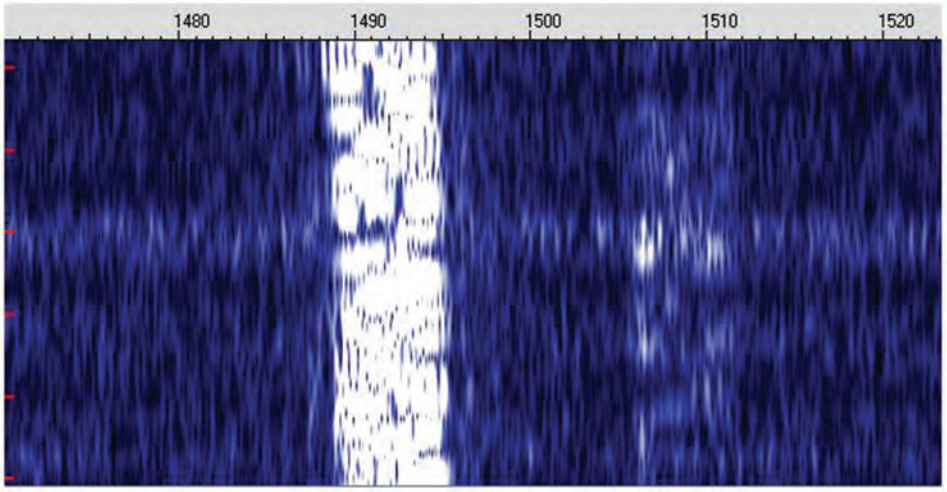


Figure 4b: Spectran waterfall display of WSPR signals

I've been "hooked" by the software defined radio (SDR) craze and my little FLEX-1500 QRP SDR transceiver is getting a lot of use, and I'm also experimenting with HF up converters and the RTL-USB SDR dongles.

An SDR lets you look at a "slice" of the radio spectrum to see signals that you may not be able to hear (analog or digital). In Figure 4a below you can see the signals and results that WSPR decodes and displays.

Figure 4b above is a close-up of WSPR signals created by an audio spectrum analyzer program called "Spectran" (similar programs are "Argo" and "Spectrum Laboratory"). It's a very handy and free tool that also provides the waterfall display missing from the WSPR program. Note the slight (1 Hz) drift of the strong signal (centred on 1492 Hz) – that's a Texas station using a 5 watt transmitter received at 0 dB SNR. The "ghostly" image (centred on 1509 Hz) belongs to a Dutch station with 0 Hz drift, running 5 watts at -22 dB SNR – more than a 100 times weaker but it was detected and easily decoded by WSPR!

VA3ROM 30M WSPR Signal Data Analysis

(Based on sample of 100 different reported spots of my signal obtained from WSPRnet)

	Freq (MHz)	SNR (dB)	Drift (Hz)	Pwr (W)	Dist (km)
MEAN	10.140174	-8.86	0.04	1.000	1583.98
MAXIMA	10.140265	4.00	1.00		2910.00
MINIMA	10.140168	-27.00	0.00	Pwr (dBm)	735.00
MEDIAN	10.140170			30	
MODE	10.140169				
			(Desktop Rocketfish 5.1 soundcard use to calibrate transmitter)		
DIAL	10.140175		*(Transmitter dial frequency)*		
MEAN Δ f	-1.000000	Hz	*(Transmitter calibrated to within 10 Hz using fcal.exe program)*		
MEAN Δ ppm	-0.098618		*(Transmitter has TCXO with 2 ppm (or better) stability)*		

Timestamp	MHz	SNR	Drift	Grid	Reporter	RGrid	km	az
2013-01-28 21:54	10.140171	-11	0	EN58jk	KE7A	EM12kx	1841	204
2013-01-28 21:54	10.140171	-8	0	EN58jk	VE6PDQ	DO34ir	1794	302
2013-01-28 21:54	10.140170	-2	0	EN58jk	W5OLF	DM78hb	1739	234
2013-01-28 21:54	10.140169	-9	0	EN58jk	K4BYN	FM05qu	1645	144
2013-01-28 21:54	10.140168	-9	0	EN58jk	K4JAF	EM70dk	2023	170
2013-01-28 21:56	10.140195	0	0	EN58jk	KV0S	EM38	1149	197
2013-01-28 21:56	10.140168	4	1	EN58jk	WB2WDC	FN13fc	1080	119

Figure 5: VA3ROM WSPR 30m Signal Data Analysis

LIES, DAMNED LIES AND STATISTICS!

All transmissions heard by other WSPR stations are normally uploaded to the global WSPRnet Internet database, created and maintained by Bruce Walker, W1BW, and stored for later retrieval by anyone interested in using the data.

You can analyze any information collected on your transmissions or that of others, and you can perform any kind of statistical analysis that you can possibly think of doing (see Figure 5).

You can check out the weak-signal propagation on any WSPR band, for any date and time, from your location to/from other parts of the world. Perhaps you want to test a new antenna design, or determine the frequency stability of your transceiver (or receiver), or see who's hearing you and vice versa, etc.

The WSPR "collective" can help you determine many things based on what you and others feed into the "hive" – resistance is futile!

One important caveat – proper frequency calibration of the transceiver/soundcard combination is a must and this is explained in the documentation. In Figure 5, I am "crunching" the numbers to test my calibration and not looking at propagation or antenna effectiveness.

You will often see wide ranges of your spotted frequency even if you are calibrated (WSPRnet), but if you collect a large sample of reports and perform simple statistical analysis, surprisingly the results will converge on your transmit frequency.

George Smart, M1GEO, posted a very interesting and detailed use of analyzing the collected WSPR data. He also includes links to his YouTube time-lapse WSPR videos.

FOR THE STATISTICALLY CHALLENGED

Dave Tiller, K4DET, created an Internet based Java app called "WSPRmap Generator" that "pulls" data from the WSPRnet and creates an animated world-map display. It plots who you spotted or who spotted you, and it should be fascinating enough to "assimilate" you.

WSPRmap can help you spot a DX station (you can't stare at a computer screen 24/7, can you?), and there's a new trend for WSPR stations to exchange eQSL "cards" based on these automated "contacts".

When I ran the map generator for the first week of July (see Figure 6), a Hawaiian grid square flashed on the screen but who was it? The WSPRnet database extraction tool revealed that it was a Hawaiian station transmitting two watts with a -24 dB SNR (6,689 kilometres), but looking closer at the data, my station had also spotted a VK2 station (four hours later) running five watts with a -19 dB SNR (14,873 kilometres).

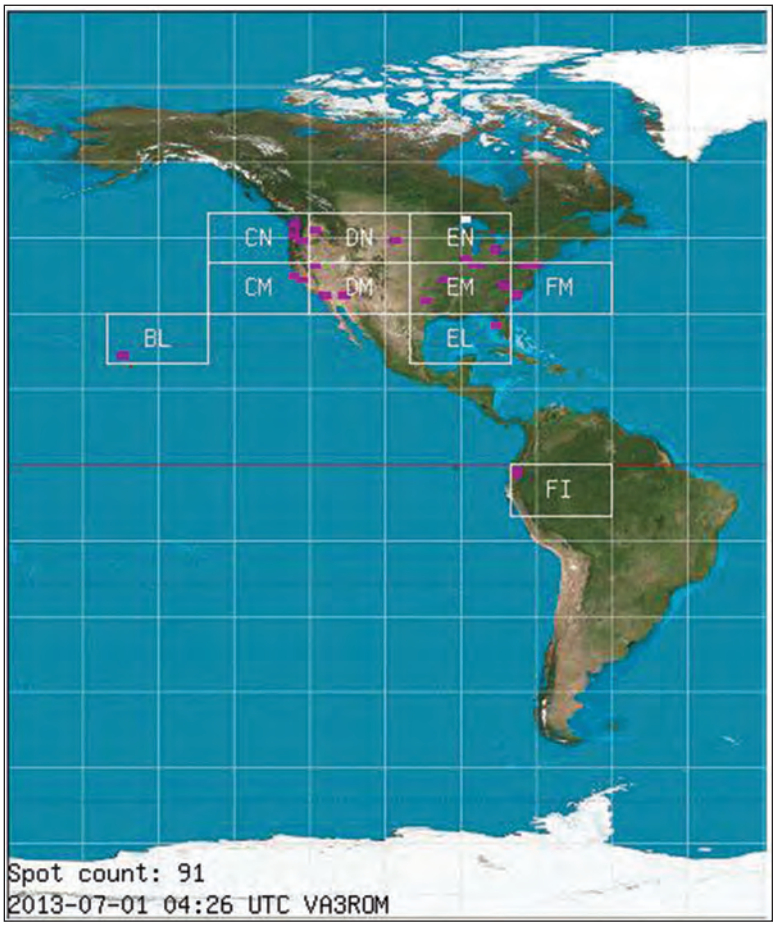


Figure 6: WSPRmap Example

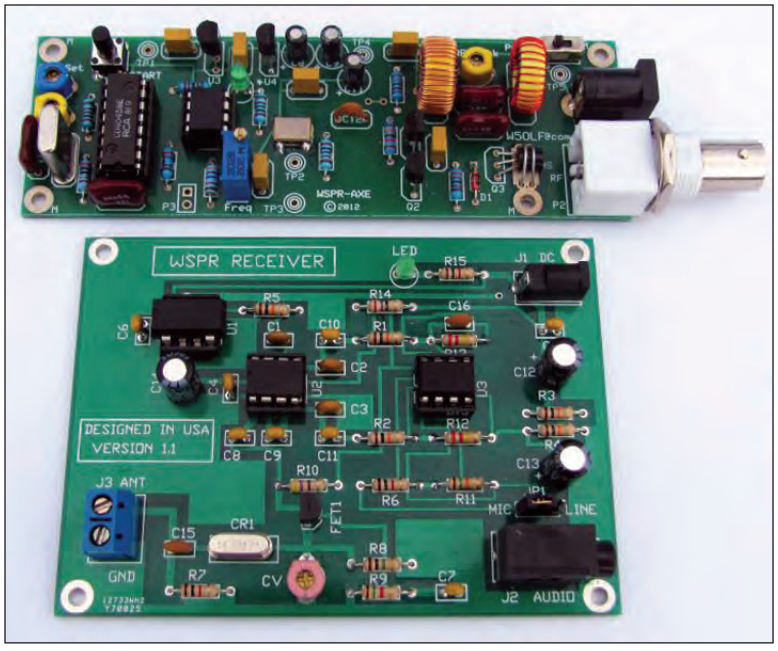


Figure 7: WSPR Transmitter and Receiver Kits

BUILD A WSPR KIT OR TWO

As shown in Figure 7, two kits are available: one is a self-contained, PICAXE controlled, QRP (1 watt) transmitter by Jay Wilson, W5OLF – no computer required.

The receiver kit is a crystal-controlled, direct conversion receiver (DCR) that connects to any computer running WSPR software, available from Stellar WSPR.

MY FINAL

In Part 2, we'll go into more detail about the "commercial" kits, look at some exciting WSPR MCU projects by Gene Marcus, W3PM, and use the "GENWSPR" program by Andy Talbot, G4JNT, that not only creates the WSPR symbol data that we load into MCUs, but also generates the corresponding audio file that you can feed into a transmitter, or WSPR program, or Spectran, or a free audio editing tool called "Audacity". – 73

REFERENCES AND RESOURCES

Audio Spectrum Analysis & Editing Software

http://tinyurl.com/n6vf9o4

http://tinyurl.com/nfakd

http://tinyurl.com/7xp2v

GENWSPR

http://tinyurl.com/n2yf2jz

WSPR Kits

http://tinyurl.com/pob9236

http://tinyurl.com/pm7sjya

WSPR & MEPT-JT

http://tinyurl.com/lbcykc3

WSPRmap

http://tinyurl.com/pjg7qsn

WSPRnet

http://tinyurl.com/kqk8lz

WSPR Protocol, Statistics & Projects

http://tinyurl.com/mn3l5fn

http://tinyurl.com/nxrwah3

http://tinyurl.com/ngxwd7l

WSPR Software & Documentation

http://tinyurl.com/ogmkh85

http://tinyurl.com/2wgcp2f

http://tinyurl.com/okdhjpq

VA3ROM: All Things Digital

http://tinyurl.com/d8nle3l

THE PWA BEACON STATIONS: A PAGE IN CANADIAN AMATEUR RADIO HISTORY

Reg Beck, VE7IG

During the 1950s, 60s and 70s, Pacific Western Airlines operated aircraft beacon and weather stations in the Canadian arctic and sub-arctic. The station at Bathurst Inlet was closed in 1965 but the one at Contwoyto Lake stayed open until much later. Originally, these stations were established because there was no weather information along most of Blue Route 84, the air route from Yellowknife to Cambridge Bay that serviced the Dew Line. Pacific Western had the contract to service the Dew Line early on and when they eventually lost the contract to Trans Air out of Winnipeg, the federal government had them maintain the stations for several more years under contract as "charter stations" because the weather information was needed.

The duties of operators were to maintain the station, do weathers and hourly synopses and to operate the LF aircraft beacon. The beacon at Bathurst had the call sign AU and the one at Contwoyto Lake was WO, if my memory serves me correctly.

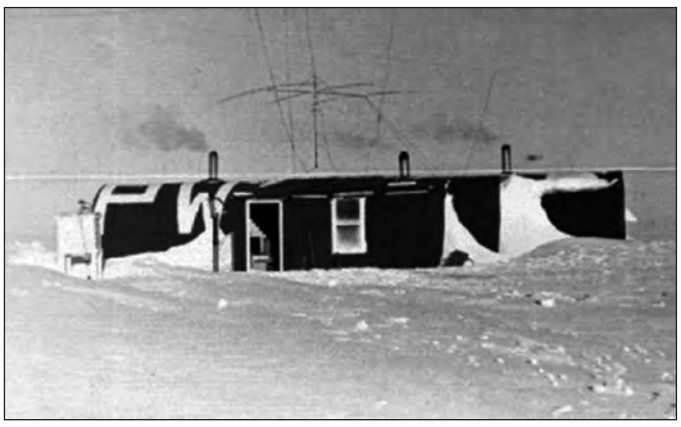
The station was a haven for Amateur Radio operators and many served their arctic years at Bathurst or Contwoyto Lake. Ted Toy, VE7HE (now a Silent Key) was the Director of Communications for Pacific Western and he knew that Amateur Radio was a good distraction during those long dark days of arctic winter. In addition, Amateurs made good radio operators.

We were confined to AM phone operation by the charter and had RROs (Restricted Radiotelephone Operator's Certificate) for the commercial operation part of the station. The power of the station transmitter at Bathurst Inlet was about 20 watts and we often could not be copied at Cambridge Bay when passing the weathers, so the operator there would say, "Go CW", and some of us who were Amateurs used to get the weather out this way until we received a notification to cease CW operation! We found out later that one of the non-Amateur operators had complained because he was embarrassed when asked to go CW and was not able.

I could write a book about this part of Canadian history, and probably should, as there are so many stories and anecdotes about events that happened on the stations involving ourselves and also our interactions with our Inuit friends who lived nearby. We closed down the Bathurst station in summer 1962 but the Contwoyto Lake station continued on for many years after. I was there probably a total of four years in three different periods.

Some notable Amateurs who worked there at different times were: Dudley Hatcher (SK) – whose call I cannot remember but who had been a VE7; Ron Kaye (now VE7XR); Dale Green (now VE7SV); Karl Gamper, VE8JJ (SK); Ivan Thomas, VK2NJ (SK), an Australian National Antarctic Research Expeditions (ANARE) operator who joined us from Australia (we flew the Australian flag as well as the Canadian flag for some time at Contwoyto Lake! and enjoyed homebrewing the ANARE beer recipe from Antarctica); Al Miller, VE7KC (SK); Shorty MacDonald, VE7AZ (SK), who used to run phone patches for years into the arctic from VE7; Johnny Kiesel, KE7V, who is a dedicated 6 metre operator; myself ex-VE8RG now VE7IG; and a host of others over the years whose names and calls evade me now. Dallas Hinton, now VE7FKH, got his ham licence some years after he left the station.

At times we had quite good stations there as we had 10 and 20 kW generators on the station. Before I left in 1965 at the end of my second stint up there, my Amateur station was a Drake 2B receiver, an SR-150 Hallicrafters transmitter and a homebrew 3-1000Z amplifier that I built on the station using a transformer out of an AT3 military transmitter rewound with wire sent up from the Edmonton PWA HQ! I also built a 4-element 20m monoband yagi on a 30-foot boom with aluminum pipe sent up on the Twin Otter aircraft. PWA was very supportive of its operators, Amateur or otherwise.



At one point Karl, VE8JJ, had a 2-element linearly loaded 40m beam there and made a lot of DX contacts on 40. Over the years we were very active working DX and contests. The day Dale arrived on the scene was the day before one of the CQ WW DX contests and he sat down at my station and worked over 100 countries in the contest before it was over! What an introduction to DXing in VE8-land!

Dale has recently been hosting incredible barbeques at his Mount Thom QTH near Chilliwack, British Columbia each August. Four of us who were there in August 2012 are ex-PWA beacon operators and are now old guys (well older anyway!). The above photo shows from left to right: Johnny, KE7V, Reg, VE7IG, Ron, VE7XR and Dale, VE7SV.

The photo below shows Contwoyto Lake in the dead of winter with Karl's tribander showing over the roof. Other pictures of the station can be seen online at: http://ve7ig.ws/hist.html

Most of us were young(er) guys when we arrived at the stations. While at the beacons I developed an interest in weather and physics in general. After leaving the station I went to the University of British Columbia and completed a BSc and MSc in physics and then taught high school math and physics for many years.

Several of the operators continued on into careers in communications, as pilots and in other fields, getting their start at Contwoyto Lake and putting to good use the time available while there and while out on leave.

Karl became an accountant, Ron a microwave wireman, Dale moved on to become a PWA executive in communications and Ivan Thomas became a helicopter pilot – to recall a few.

None of us will forget our time in the north!

PUBLIC SERVICE / ARES

Doug Mercer, VO1DTM
Box 1042
84 Main Road
Goulds, NL A1S 1H2
709-364-4741
vo1dtm@rac.ca

I'm happy to introduce this issue's ARES column, and humbled by the high level of effort and expertise that you folks bring to your Public Service deployments.

First up, Alberta Amateurs burn the midnight oil during the Alberta Floods in High River and the Wood Buffalo Region. It's not reported here, but the de-brief held on July 27 was hosted by RAC and attended by Regional Director Mitch Mitchell, VE6OH. Well done folks!

I was very impressed by the submission by Lanark North Leeds covering their Balloon flight VE3MW-11. Enjoy!

In this issue you will also read about Renfrew County West's exercises during May 2013. Great work guys.

It was great to read about the volunteer recognition for the great work done by Manitoba Amateurs during the Manitoba Marathon. Hope you enjoy it.

Finally, find out about how the Westcumb ARC supports a recent Cross Border Challenge.

All great effort with great results!

Doug Mercer, VO1DTM CEC
RAC Chief Field Services Officer

HOW FIELD DAY BECAME A REALITY: THE STORY OF THE HIGH RIVER, ALBERTA FLOOD OF 2013

Fast-moving floodwaters three-feet deep at 3 pm on June 20, taken from the 2nd floor of the High River Hospital (Photo: Marian Bryan, AHS)

Vince d'Eon, VE6LK – Foothills Amateur Radio Society/ARES, Okotoks, Alberta
With contributions from Kerry Atkinson, VE6GG and Ian Burgess, VA6EMS

What follows are three first-person reports of the happenings in High River Alberta from June 20 to 22 and the support that Radio Amateurs provided. Unprecedented flooding rapidly struck the area after 100 millimetres of rain and above average temperatures in a 36-hour period. High River is located just east from the Foothills of the Rocky Mountains and is about one hour south of Calgary.

Vince d'Eon, VE6LK, reports:

It was Wednesday night before Field Day about 9 pm. Scott Nalder, VE6OBL, Dann St-Pierre, VE6TD and I were sitting around my dining table and giving some guidance to our Field Day commander Scott, a newer ham in our club (the Foothills Amateur Radio Society) based in Okotoks Alberta, south of Calgary. Scott earned his Radio Amateur operator's certificate about four years ago and is very well prepared and interested in Emergency Communications and all things Amateur Radio. The weather was pretty lousy that night with lots of rain, and the weather forecasters were calling for up to 100 mm of rain and warm temperatures within the next 36 hours. *Of course*, I thought to myself that *the weatherman is mostly almost wrong with a forecast*, but I really hoped for bad forecasting skills as the rain hit the window and my back deck. Snow in the mountains sticks around until mid or late July but this year would be very different.

Little did we know our Field Day would be one of the largest EmComm events the Province of Alberta had ever seen and testing our limits far beyond our Field Day planning. Just 24 hours after our planning meeting was held, 18 towns and municipalities would be under a State of Local Emergency for the worst flooding ever seen here.

But I'm getting ahead of myself…

The Foothills Amateur Radio Society (FARS) is based in Okotoks, Alberta. It's my hometown, having moved from Ontario in October 2012. Our members commute from 100 kilometres away to attend our social gatherings and meetings. Our repeater network is fully linked, hub and spoke style, and covers an area of approximately 50,000 square kilometres. We've been working with local townships for 20+ years helping with floodwatch, providing repeaters for those supporting forest fires, and the more fun events like the local parades and festivals. Within FARS, I'm one of two Assistant Emergency Coordinators (AEC) and Scott, VE6OBL, is the other. Since attaining my Amateur Radio certificate in 2002 I've been heavily involved in public service events in all types of terrain in two different provinces. I enjoy the work and to be of service to others.

Our EC Wally Gardiner, VE6BGL, was out of the country at this time, thus Scott, VE6OBL, and I were on call as his backup. I had met the Town's Incident Commander (IC) over breakfast just a few weeks earlier with Wally and got to know him. We are fortunate in that the Town has been integrated with FARS and ARES for a number of years and we are a key part of their plans. Thus I was happy to have that opportunity to meet the Town's IC and I thought *it's always nice to know someone you may need to work closely with*.

Ian Willumsen, VA6IAB, at the High River EOC (Photo: Tammy Scheirman, VA6TSS)

The next morning, 12 hours after our Field Day dining table planning session, the Trans-Canada highway was closed in Canmore, washed out by Cougar Creek. Highways in other areas were also reported to be in poor shape or with landslides from the heavy rain. Flooding was becoming a possibility for the City of Calgary and the Town of High River. At this point I was pretty certain that my weekend volunteering at a public service event in the mountains wouldn't happen. Later, I learned it was cancelled owing to washed out roads and bridges.

Thursday morning I kept an eye on the news and Twitter feeds while at work. For some reason that day I'd packed both of my HTs and spare batteries where I normally carry just one. Maybe I felt something was going to happen as I left home that morning and was hoping that I would be so very wrong. The Twitter feeds were coming in fast and furious with news of road closures, local flooding and all things that heavy rain plus warm temperatures can bring.

Ian Burgess, VA6EMT, reports:

When browsing the morning news I read that the Calgary Area was expecting heavy rains with possible localized flooding. Upon reading this I placed a call to Scott Nalder from FARS, as he was the liaison that was established between my unit in Calgary and FARS. I told Scott that if he needed any resources to contact me and I would organize people in Calgary for FARS deployment.

Kerry Atikinson, VE6GG, reports:

I received a call from one of our AECs at about 1230h advising me that the Provincial Operations Centre (POC) had requested ARES to staff the radio room. As he was unable to attend I proceeded to inform my boss that I would be "off for a while due to the flooding" and then proceeded to activate the Edmonton group and drive to the POC. During this drive, one of my newest ARES members Barry, VA6MIA, took the logistics net and began coordinating volunteers for our response. I was then in telephone contact with the Alberta SEC Curtis, VE6AEW, who informed me that he had most of the Southern Alberta Repeater Association (SARA) linked in and was on his way to the POC as well.

On arrival, I started up the radio room, found the Operations Chief and asked what he wanted. His response was that communications were failing into Canmore, High River and Exshaw and asked us to establish RF links with Amateurs in that area.

Curtis, VE6AEW, arrived about that time and after a short briefing he began to plot a way to get repeater coverage into the affected areas. High River became our priority when the Alberta POC lost contact with the High River EOC about 1430h.

WHEN ALL ELSE FAILS AMATEUR RADIO CAN GET THE MESSAGE THROUGH

On June 11, 2013 the Regional Municipality of Wood Buffalo declared a state of local emergency (SOLE) due to heavy rain and flooding. The rivers in the area were dangerously high and some had caused damage.

The municipality had requested all departments that included groups like Amateur Radio Emergency Service (ARES) to send a representative to the Regional Emergency Operations Centre (REOC). Some members were on holidays and others were away on a business trip like I was in Vancouver.

After many calls, emails and texts we managed to get some volunteers to man the REOC. During this time, thanks to the Telecommunications Workers Union (TWU) – and Telus who excused me from the meeting in Vancouver to handle the situation – arrangements were made by the TWU for me to urgently return to Fort McMurray.

The ARES group of the Fort McMurray Amateur Radio Club manned the REOC for just over two days (Tuesday, June 11 to Thursday morning June 13). Through our local repeater network and the great assistance of Edmonton ARES, we established direct voice communications over the Internet, using IRLP when a major communications line was threatened and when normal phone and Internet to the REOC, Airport and along Highway 881 went down.

I would like to personally thank the Telecommunications Workers Union and Telus for their support of community volunteers during this time of crisis and for giving me the opportunity to contribute in this time of crisis. Bravo Zulu to both of these organizations for their support.

I would also like to thank the Fort McMurray Amateur Radio Club and the Wood Buffalo ARES group whose volunteers manned and maintained a viable alternate communications path for the community for over 48 hours. The Cold Lake ARES group also went on standby and offered assistants from labour to communications.

Also last but not least Edmonton ARES group who respond to requests from all over the province and regularly man the Provincial EOC in support of others. The Edmonton group also has a trailer with repeater and portable communications control that was placed on standby for our community.

A quote for AEMA Employee, Jim Cornish:

"VMT to ARES for setting up alt comms b/w POC and Fort Mac this week. Not needed in the end, but a comfort to have in back pocket!"

Due to the nature of the emergency, our Internet connection at the repeater site went down three times. If we had a direct RF connection to Edmonton this would give the ARES group, PEOC and REOC other options. Our volunteer group needs the communities help in accessing a tower site to collocate at May hills and Boyle.

For Further information please contact:

Ken McPherson, VA6KM
President / Emergency Coordinator
Fort McMurray Amateur Radio Club / Amateur Radio Emergency Service
va6km@fmarc.ca

High River EOC Incident Commander Ross Shapka (at right, in green) briefs Premier Alison Redford at centre, in red) on Saturday morning June 22, 2013 (Photo: Ian, VA6IAB)

Ian, VA6EMT, reports:

Calgary Regional ARES was activated via email and Twitter with a Single Point of Contact for volunteers being Dan, VA6DJK. Dan was taking phone, radio and email traffic sorting out a chart of who was available and for how long. This chart was constantly being updated throughout the deployment. The initial response happened very quickly.

Vince, VE6LK, reports:

I received a phone call from our ARES SEC at the Provincial Operations Centre about 1330h that day. The order was simple: to deploy to High River as the situation was rapidly worsening. There were no other details given about staffing needs overall as all communications with High River EOC were unavailable.

The last time I worked the Emergency Operations Centre in High River was in June 2005 and the EOC was in the Town Hall. The event was flooding then, too. Later that month Calgary had a flooding event. I'd later learn those were only glancing blows compared to what we were about to face.

I arrived at the EOC some 2.5 hours later owing to many road closures from high water, normally a 45-minute drive.
En route the cellular networks were so jammed that it was unpredictable if my SMS would get through to anyone let alone a phone call. During my travels I was able to raise Scott, VE6OBL and Dann, VE6TD, on our repeater network. They dropped what they were doing and got home for their go-kits and equipment. Along the way Ian Willumsen, VA6IAB, joined us. Dann, Ian and I would become the core EOC team in High River.

Kerry, VE6GG, reports:

We were in contact with Vince who was having major issues getting to the High River EOC with road closures and, from what we could tell, non-admission to the townsite owing to the evacuation order.
I went to the Operations Chief, the Transportation Chief and the RCMP liaison in the POC, and explained the situation and got a spot that Vince could access High River with guaranteed passage. This was relayed to him by Curtis. About 15 minutes or so later Vince advised he was at the EOC in High River.

Shortly after, there came a knock on the radio room door and there was the Ops Chief with a person from Alberta Health. "How soon will you have communication with High River?" Our response was "right now". I don't think he expected us to be fully mobilized that soon! Over the next 17 hours we would pass messages between High River and the POC since Amateur Radio was the only reliable communication link between these two centres.

Vince, VE6LK, reports:

Mission one was to establish a link to High River, which was previously cut off from the Provincial Capital. We had deployed into one of the worst hit areas in under three hours, and in doing so significantly exceeded expectations of those in the POC.

High River is a small town about a 45-minute drive south of Calgary. It is mostly flat with elevation changes of 100-feet. They have a well-rehearsed Emergency Operations Plan as they activate each spring. They had already activated once this year for flooding.

When I got to the High River area, my cellphone stopped working; the Telus network had failed. Traffic lights were out almost everywhere, stores were dark and there was lots of water in parking lots. It was quickly apparent to me that this flood would be much different than in 2005. *The spot where I meet the gang of fellow Radio Amateurs for breakfast each Saturday would likely be closed for a while*, I thought, as I passed by and saw water in the lobby.

From what I saw earlier on Twitter the EOC had been moved from Town Hall to the Firehall a few hours earlier owing to a flash flood surge. As I arrived there was discussion about leaving the Firehall as the waters were still rising at an alarming rate. A mandatory evacuation for the Town of 13,000 residents had been declared. Evacuation centres opened up in nearby towns. Phone lines and one major cellular network were offline. Power was spotty but fortunately stable where we were. Helicopters were everywhere flying a variety of missions. It was like a scene from a movie.

Mission two was to get an operator into the Hospital, which was surrounded by four feet of fast-moving water. We talked of helicopter and boat deployment, but in the very early stages the flights weren't coordinated by the Town and the flight never happened. Waters were moving too fast to safely explore the option of a boat; this was confirmed by a quick trip in a loader truck by two operators with handheld radios. This operator was needed to support the upcoming evacuation of the hospital; we'd later get the two operators in on Friday morning when waters had receded from the building.

With floodwaters threatening our temporary EOC at the High River Firehall, we moved down the highway to the Nanton Firehall; normally a 25-minute drive but now complicated by road closures, it took us an hour. Scott, VE6OBL, had begun the recruitment of field operators along with Doug Howard, VE6CID and Andrea Howard, VE6SEV. When I started driving to Nanton it was apparent that I could not manage the entire situation so I transferred Net Control and Scheduling to Scott.
I told him it was called a field promotion and gave him some general guidelines on what we needed and when. He quickly assembled five other people to work from his home – our to-be Field Day site, already equipped with food and drink for 15 people. Like myself, they'd go around the clock for a lot of hours with few breaks.

The decision to split off Net Control from the High River EOC happened out of logistical need but turned out to be the best thing we did to help the Town of High River and Alberta Health Services (AHS). It allowed those of us in the High River

EOC to focus purely on the job at hand. To Net Control, we were just one of seven field sites for which they were handling traffic. We will follow this approach again to better manage traffic.

Upon arrival at Nanton we established our radio links and a provincial teleconference via landline was starting in 10 minutes as the POC was urgently seeking an update. They hadn't heard from us formally in an hour; it could be because we were on the highway, a bit busy to take a phone call. With the teleconference over and the danger passed, we returned to the High River firehall some seven hours after I first set foot on the ground. We breathed a collective sigh of relief, but now the real work was starting.

Scott, VE6OBL, reported to me that we didn't have enough available people for Saturday's shifts at about this time. It's time for a call to a neighbouring ARES unit to see if they can help out.

Ian, VA6EMT, reports:

Late on Friday night Vince contacted me to request nine members for 0800h. With the list we were maintaining we had all members confirmed within the hour.

Vince, VE6LK, reports:

At 0030h on Friday I'm taking stock of the situation. At 1030h on Thursday the EOC moved. At 1800h we moved again. Then at 2130h a third time – back to High River Firehall. This is unprecedented. Sewer systems are down, water is coming from the reservoir, 90% of electricity is gone, phone systems are offline/overheating, the Town's website and IT infrastructure are offline and there is one working phone in the EOC. Some neighbourhoods are under 11 feet of water yet others are untouched. And my team and I are in the middle of all of this and keeping the Town connected to the outside world.

"When all else fails, Ham Radio keeps working", I think to myself. I placed a call to my Net Control headquarters and spoke with Scott, VE6OBL, about staffing, telling him what we needed and where. He'd decide the shift schedule and take care of it. But, he was shorthanded for people tomorrow afternoon. I told him I'd arranged for Amateurs from the Calgary Area to help us – and they sent lots of people over the course of the next 48 hours. It's nice to know that you can rely on your neighbours! Keep in mind that during this time Calgary ARES is also supporting radio operators in Calgary, Canmore and Medicine Hat as a part of the Provincial response.

Our two missions were simple: to keep messages flowing between evacuation centres in nearby towns; and between the two hospitals in Black Diamond and High River back and forth to Alberta Health Services. At 0800h on Friday we deployed two resources into the High River Hospital which was beginning an evacuation owing to failed Town infrastructure. Our guys kept AHS informed of progress by the only method we had – Ham Radio – with radio operators at AHS' own EOC in Calgary. We pulled out of that Hospital at 0100h on Saturday after the last patient was evacuated. The Black Diamond Hospital was also evacuated owing to failing Town infrastructure. Keeping in mind that many communities were hit hard, hospitals in a few areas were under consideration for evacuation and the communications link was vital in making those decisions.

Vince d'Eon, VE6LK, (left) waiting to give status report at Saturday morning situational report meeting at High River EOC alongside Canadian Military (centre) and Ross Shapka, Town of High River Incident Commander (right) (Photo: Dann, VE6TD)

As integrated members of the Town's Emergency response program, we were active participants in the Situational Report meetings held through the day. We gave reports on our status as did those from Public Works, the Police, the Military, Alberta Health Services, Alberta Emergency Management Agency and all others. We are honoured to be at that table and to serve.

Operations in an EOC are controlled chaos. We are privy to very much information that is highly confidential. We hear about everything yet see nothing so it's sometimes hard to grasp the reality of the situation. We worked shoulder to shoulder with those that had lost their homes yet soldiered on with much professionalism. I was greatly moved by this. Our temporary EOC was one-third the space of the normal area and, owing to the magnitude of the event, the EOC team was three times it's normal size. It's hot, cramped and very noisy. We saw politicians from the Local, Provincial and Federal levels come in for meetings. It's a place that only level-headed and well-trained operators should work in, yet we still managed to have a few less-experienced folks by our sides as message runners so they can learn for the next big event.

It's now Saturday morning and the sun is rising. Thanks to a satellite services provider, we now have Internet, laptops and some VOiP phones in the EOC. Up until now, everything's been done with pen and paper. Telus has delivered a mobile Cellsite-On-Wheels in the area. Cellphones are available for all EOC team members. I finally get a few minutes early that morning to catch up on the news with my iPad and to plan our de-transition from the EOC.

When the phone lines and Internet were stable, we had completed our missions and we stood down at 1330h. We were no longer required, we did what needed to be done and when it needed to be done. We left for the site of Net Control, Scott, VE6OBL's house, for a meal and a debrief meeting. We needed to just unwind and share our experiences. Any discussion of continuing with our Field Day plans were met with friendly objection – after all, we were pretty tired and emotionally tapped. I returned home at 1800h, some 52 hours after I picked up my gear from my home at the start of the event.

Our winning edge was our ability to deploy rapidly and establish net quickly and professionally. It was also key that we have an excellent ARES organization in Alberta that is well-organized. We regularly communicate as ECs and AECs, and have a well-documented and up-to-date resource guide outlining repeaters and phone numbers thanks to Curtis, VE6AEW and his provincial team.

We quickly built bridges with all those we were there to serve and established with them what we could do for them and what we could not. And we proved that a group of Radio Amateurs are really Professional Radio Operators. The difference is that we receive no pay – and isn't that the only difference between a Professional and an Amateur?

Kerry, VE6GG, reports:

I need to praise the small group of very dedicated people in Edmonton. 95% of us are working full time. These people stepped up, rotated on 12-hour shifts to keep the Provincial Operations Centre manned and communications open from Thursday until Monday. Curtis, VE6AEW and Kiernan, VA6IP, drove on Sunday to southeastern Alberta to set up a link to Medicine Hat, a 900-kilometre roundtrip. We used D-Star and HF with actual messages passed in this disaster. Everyone that was involved in Edmonton put forth an effort to support the southern areas and continued right up until the POC stood us down on Monday at 1200h, almost four full days later.

On leaving, the on duty Incident Commander came by, stuck out his hand, and said Thank you, to the Edmonton Team, and all those that worked in Southern Alberta, especially High River. For a group of Amateurs, you guys truly are professionals.

Vince, VE6LK, reports:

I can't be more proud of the entire FARS and ARES teams from all areas. We had a team that exceeded 50 Radio Amateurs working around the clock delivering almost 700 hours of effort in providing a critical service – communications – when an entire town needed us the most. We are a blend of new-ish Hams that were well-prepared along with number of very experienced Hams.

I started this story about Field Day and I will end it the same way. I'm very pleased to say that Field Day exercises plus regular Net participation gave us the skills we needed. I encourage everyone reading this article to do these simple things if they wish to help in times of need.

Of course if I did file a contest entry with the ARRL, our exchange would be 5 Foxtrot Alberta for the number of control stations we had on-air and operating from an EOC. We'll probably win something for the sheer volume of traffic combined with interactions with governmental agencies alone! Ya know, I think I'll petition the ARRL for a new category: operating from an EOC during Field Day under actual Emergency Conditions. Hmmm…

LANARK/NORTH LEEDS-ARES GROUP: THE LAUNCH AND FLIGHT OF VE3MW-11

On May 8, the Lanark/North Leeds (LNL)-ARES Group, participated in the launch and flight of VE3MW-11, a High Altitude Amateur Radio Balloon as an educational project for St. John Elementary School in Perth, Ontario. This was the 12th launch for the group of Parents, Students and Amateur enthusiasts known collectively as the Lanark Amateur Space Agency (LASA).

While VA3ZKS, VA3KAI, EC VE3BSB, VA3LFP and VE3JDJ were in attendance, the balloon was prepared, fuelled with helium and launched by the students.

The flight package carried by the balloon is equipped with a camera, a GPS receiver and a transmitter which sends data from the flight package to a series of Amateur Radio stations in the area. These stations automatically forward the data to the Internet to be displayed on a website at: http://www.aprs.fi

The data contains a radio call sign to identify the flight. In this case the call sign was VE3MW-11 in memory of a local Amateur Radio operator, Hap Chafe, who had been a fighter pilot during the Second World War and a member of the local Amateur Radio club. In addition the data provided information that showed the map position, altitude, speed and direction of the flight. This enabled observers to watch the flight in real time on the Internet or in chase cars that were attempting a recovery.

The balloon took off from Perth and travelled north towards Mississippi Mills, where it circled overhead for almost an hour and reached a height of 36,000 metres or 118,000 feet. It then proceeded west at a speed varying between 20 and 45 kilometres per hour.

The balloon was launched at 2:06 pm and after 4 hours and 38 minutes of flight, the balloon burst after the balloon expanded to a diameter of almost 30 metres. The flight package then went into a free fall from the edge of space to a point where there was enough atmosphere to open the parachute. It then glided down to a landing at 5:20 pm in a wooded area east of Highway 41 south of the village of Griffith in Frontenac County. As there were no APRS digipeaters in the vicinity, the last position report was received when the balloon was at 1200 metres and descending on the parachute. Descent and speed data from the last two packets provided a calculation of impact within 500 metres of the last known position.

The recovery team of EC Barrie, VE3BSB, Allan, VA3KAI and Luc, VE3JGL, went out to the site on Thursday morning and walked around in the heavily wooded area but were not successful in spotting the red parachute and flight package. Norm, VE3JDJ, a member of the Smiths Falls Flying Club, undertook an aerial reconnaissance and took photographs of the area to see if we could pinpoint the exact location of the flight package in the thickly wooden area.

The analysis of the pictures and flight data is still under review and a ground search party will again visit the site with a view to recovering the electronic equipment and pictures from the camera.

Submitted by LNL-ARES AEC Norm Hagan, VE3VY

RENFREW COUNTY WEST-ARES GROUP HAS A VERY BUSY MONTH

Submitted by RCW-ARES Group Coordinator (EC) Bob Howard, VE3YX

The Renfrew County West (RCW)-ARES Group in Eastern Ontario was involved in three exercises during the month of May.

The first was a setup exercise for the Reception Centre for the Deep River / Laurentian Hills Nuclear Emergency Plan. The only other sites involved in this exercise were the Red Cross.

Yvonne, VE3RYA, and Group Coordinator (GC) Bob, VE3YX, set up the station in the Reception Centre (Deep River Arena), Assistant Group Coordinator (AGC) Richard, VA3BIX and John, VA3IOI, operated the Pembroke Red Cross station and Peter, VE3BQP, acted as Ottawa Red Cross from his home in Ottawa. We passed packet messages using Outpost amongst the three stations.

Next was a tabletop exercise of the Joint Traffic Control Centre also of the Deep River / Laurentian Hills Nuclear Emergency Plan. Our ARES group had never been involved with this Centre in the past and GC Bob couldn't remember any reason why, so went to the Petawawa Civic Centre and set up a packet/voice station in the lunch room adjacent to the meeting room used for the exercise.

During the exercise, GC Bob was invited to speak briefly about ARES, and after the exercise the Centre members had a look at the "communications room" and watched while the GC passed some messages back and forth with Yvonne, VE3RYA, who was operating an Outpost station at home simulating the Municipal Emergency Operations Centre (MEOC). The group seemed quite impressed and now we have to add another Centre to our list of Centres to be manned during exercises. (We don't expect to ever have to do this for real)!

While we have a permanent antenna mounted on the Civic Centre, it wasn't in a convenient location for this exercise so the GC used a mag mount 5/8 whip stuck to a baking sheet set on a kitchen counter. The main Outpost BBS we used was VA3RBW-1 in Point Alexander, Ontario and the group coordinator used the node at VE3NRR in Pembroke to reach it.

Lastly, GC Bob, VE3YX, was invited to do an ARES presentation at the beginning of a Pembroke Municipal Control Group (MCG) exercise. He used a PowerPoint presentation which was initially developed by RAC Ontario East Section Manager, Michael Hickey, VE3IPC, and then modified to include locally relevant material. The presentation was very well received.

The members of the MCG were primed to pass some messages to other locations through the packet station that the GC had set up at the back of the EOC. During the exercise, GC Bob was flooded with messages to be sent to sites simulated by Yvonne, VE3RYA, at home and Rob, VA3AGN, at Pembroke Red Cross. Once again, the 5/8 on the baking sheet made a showing mounted on a window sill of the Emergency Operations Centre (EOC). Pembroke will be building a new EOC in the near future and our ARES group will be involved in siting a location to use as a radio room and a permanent antenna.

On June 19 and 20, the Renfrew County West (RCW)-ARES Group participated in a County-wide exercise called "Burning Bridges".

The scenario involved a forest fire occurring on a very hot dry day with resulting power outages, auto accidents and evacuations. Some municipalities declined to participate as they had recently held exercises.

At 2100 on June 19, Group Coordinator Bob, VE3YX, received a call from the Petawawa Community Emergency Management Coordinator (CEMC) requesting ARES set up in the Petawawa MOC and provide communications with Red Cross in Pembroke and Laurentian Hills EOC (where we have HF Winlink capability).

AGC George, VE3GPD and GC Bob, VE3YX, set up a voice and packet station at the EOC. John, VA3IOI and Rob, VA3AGN, operated at the Red Cross in Pembroke while Yvonne, VE3RYA, acted as Laurentian Hills EOC from the home station. (Laurentian Hills was one of the municipalities not participating.)

Peter, VE3BQP, operated from his home station in Ottawa with telephone contact to Red Cross Ottawa. Most traffic was passed using packet with Outpost, while we kept in voice contact using the 2m repeater network. The link timeout timer on VA3RBW was disabled to allow a continuous link between VA3RBW in Point Alexander and VE3NRR in Pembroke. This allowed handheld communications from Deep River to Pembroke and Petawawa.

We were stood down at 2230. After the exercise, the Petawawa MCG assembled in the radio room / CEMC's office to observe the radio operations. We have yet to install a permanent antenna at this EOC and this exercise will probably help to "grease the wheels" to get it done.

The next morning at 0900, Group Coordinator Bob, VE3YX, received a call from the Laurentian Valley CEMC requesting ARES to set up in their EOC. (Laurentian Hills and Laurentian Valley are different municipalities!) AGC Richard, VA3BIX and GC Bob, VE3YX, arrived at the EOC (South of Pembroke) at about 1000. An outside antenna was required here so an Arrow type J was put on a mast outside the radio room / Mayor's office, and the station was on the air by 1015. Meanwhile, Deep River was having an EOC set up exercise and Yvonne, VE3RYA, set up in the radio room / meeting room where we have a connection to a permanent antenna on the roof. She used the outside antenna for packet and a handheld through VA3RBW for voice.

Once again, VA3RBW and VE3NRR were linked with the timeout disabled. Meanwhile, John, VA3IOI and Rob, VA3AGN, were again at the Red Cross in Pembroke and Peter, VE3BQP, was at home in contact with the Red Cross in Ottawa. Again, messages were passed by packet using Outpost with only a minor glitch involving a temporary problem with a packet node between Pembroke and Ottawa.

We were stood down at about noon and the RCW-ARES group coordinator was invited to do an ARES PowerPoint presentation for the Laurentian Valley MCG. After the presentation, the MCG members viewed the radio operations in the radio room.

As in Petawawa, a permanent antenna should soon be in the works. When asked if we should set up at the County building, we were informed by the County CEMC that "that part of the plan was not going to be exercised".

TCA

WESTCUMB ARC SUPPORTS CROSS BORDER CHALLENGE

Members of the WestCumb ARC in Amherst, Nova Scotia participated again this year in the YMCA Cross Border Challenge. The Cross Border Challenge Race Series is a series of quality race events scheduled around Cumberland County between the months of April and October. There is something for everyone: 5K, 10K, runners, walkers, children's races, beautiful scenery, great friends, medals, awards, surprises and so much more. The Cross Border Challenge series races are an initiative of the Cumberland Y service Club.

Net profits from the Cross Border Challenge Series Races go to support local charitable community organizations.

Nine Amateurs volunteered their time to provide communications for the race at key locations along the route. Net Control was located at the Amherst Stadium while other members were at water stations and one member (Mike, VE1MY) took part in the 10K race following behind the last walker. This year a Half Marathon was added to race day so more Amateurs were needed to provide additional communications at the three new water stations.

The route for the 10K began in Mount Whatley, New Brunswick continuing across the marsh to Nova Scotia and ending up in Amherst. The Half Marathon also took that route but added a run around the new Wind Farm in Amherst, Nova Scotia. There were 56 messages passed during the three-hour event. Priority messages included two runners having to drop out of the race, more water cups and first aid kits needed.

The above picture shows WestCumb ARC members before they headed out to their locations along the route.

From left: Kevin Burke, VE1KEV, Mike Masters, VE1XDT, Glenn Wallis, VE1GK, Mike Embree, VE1MY, Peter Hebb VE1SM, Lloyd Smith, VA1MAB, Bob Tuttle, VE1DR and John Gorden, VE1JSG. Taking the picture was Jim Langille, VE1JBL.

For more information on the Westcumb ARC visit: http://http://www.westcumb.ca/

Submitted by Jim Langille, VE1JBL

MANITOBA MARATHON VOLUNTEERS RECOGNIZED

Fifteen long-serving Amateur operators that have continuously volunteered for the Manitoba Marathon – and have been volunteering for over 20 years – were recognized on May 22 with approximately 50 other long-serving Marathon volunteers during a reception at Government House in Winnipeg as part of the Marathon's 35th Anniversary celebration (see the photo on the left).

The Amateurs recognized were VE4S: HK, HQ, NQ, SE, ACX, AJO, DWG,EAR, GLS, HAY, MBQ, MHZ, RST, TRO and XYL.

Submitted by Jeff Doyvak, VE4MBQ – Emergency Coordinator, Winnipeg ARES
Photo provided by the Manitoba Marathon

Ralph Webb, VE7OM
15613 18th Avenue
Surrey, BC V4A 1X3
E: ve7om@rac.ca

CLUB CORNER

— NEWS FROM AND ABOUT CLUBS

It seems strange...

to write this after so long a break. Field Day has come and gone, and now we are into the summer "event" season, with all that comes with helping out at various venues, meeting old friends and introducing new Amateurs to some of the joys of "paying back" to the community. Not only helping out in various towns and cities around the country, but participating in various radio events Islands On The Air (IOTA) contests in late July, and of course the lure of mountain tops for the Summits On The Air (SOTA) group.

We have read and seen on TV the flooding in southern Alberta. I understand that a number of local Amateur Radio groups had participated in passing messages for both local officials and the public during the emergency. I have had no direct information, but I expect that RAC will have some sort of report for the members to show just what can be done when everything falls apart. I look forward to reading the reports. (Note: you are correct Ralph! Please see the article on page 42.)

We all practise our communication skills at various venues and times. We never think that we'll actually use our skills, but we keep them honed anyway. These recent events have just shown us that we never know when we'll be called to bring our equipment and set up something to communicate for a third party whose communication system had gone silent. Keeping up our practising – yes, even thinking that we'll never use it "in anger" – is just what we do, and we should keep on doing it!

It only shows that with a little bit of determination some great things can happen. I was interested to read in the recent West Island ARC's "Bulletin" that a number of DXpeditions were undertaken to St Paul Island and Charlton Island in James Bay. Only proving that you don't have to go to some exotic tropical or at least warm place to do a DXpedition. Back in the early 1990s, members of the club made the long roadtrip to northern Quebec and then over to the sparsely populated north island; and then in subsequent years, back to the larger south island. Certainly not an exotic location, but probably rare enough to be a wanted entity on IOTA (If it was running when they went there) or just a great place to have a QSL card from. From the article in the newsletter it seemed that the WIARC made a number of these expeditions for a number of years, but hasn't done one in a few years. I wonder if these days they would be able to use the rather rare VY0 or CY9 prefix on their excursion.

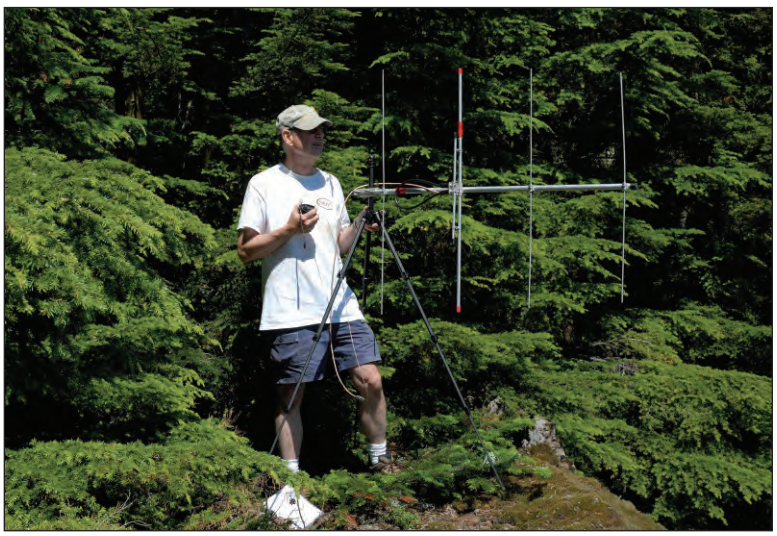
The July issue of the Surrey ARC's "Communicator" had a multi-page report on their Field Day ops. Nothing second rate here, as they report over 950 QSOs on CW plus RTTY and PSK31. There were also good rates achieved by SSB ops as well. Most of this edition of the newsletter was given to graphs of their operation, hour by hour, operator by operator and band by band, which made the whole thing very easy to understand. Certainly not your "mom and pop" Field Day operation here, but a fully functioning contest style "go get at it" thing.

Of course, having a good "driver" in the person of Brett Garrett, VE7GM, didn't hurt, as his many hours of planning and prodding paid off in their score. They planned and operated the event under the Incident Command System which proved to allow good control and fast response to changes as needed. We'll see how they did against the other "big guns" around the continent when the results are in.

On Saturday, July 20, three members of the White Rock ARC – Eric Kehler, VA7NX, Brett Garrett, VE7GM and yours truly, Ralph, VE7OM – activated Mount Agassiz, SOTA mount VE7/FV-012 for the first time. Very few of the summits in BC have been activated, particularly in the southwest corner of the province. There has been more interest in SOTA in VE2, but not much elsewhere. Last year, Eric and Ralph activated Mount Cheam, that being the first activation in the Fraser Valley region. The photo below was taken by Eric, VA7NX, and shows yours truly at the top of Mount Agassiz working two metres.

SOTA-ing is a great outdoor experience. Sometimes the climb to the top can be challenging, particularly for those of us who are "somewhat" out of shape, but it is a very rewarding experience. To see the countryside from the bird's eye view that you get from a summit can be exhilarating. And then to operate a QRP (or other) radio from the summit, making contacts around North America and perhaps elsewhere, is a testament to the effectiveness of our communications skill and ability. Just don't do what I did coming down the slope after we were all finished. I lost sight of my two companions and missed the spot where the truck was parked. I had to keep in touch with them on the HT, and then blew my locator whistle for them to steer me back to safety... but that's another story!

I'll close by wishing everyone a great fall and hoping that you've had a great summer with your favourite radio.



Bob Nash, VE3KZ
5260 14th Sideroad, RR6
Milton, ON L9T 2Y1
Tel. 905-878-7382
Email: ve3kz@rac.ca

THE SPORTS PAGE

— THE CANADIAN CONTEST SCENE

The contest results provided in this column are courtesy of the Maritime Contest Club team:

Gary Bartlett, VE1RGB
Scott Nichols, VE1OP

For more contest information check out these online sites:

http://www.hornucopia.com/contestcal/weeklycont.html

http://www.contesting.com

http://www.sk3bg.se/contest/

http://www.arrl.org/contests/calendar.html

http://www.arrl.org/contests/rate-sheet/about.html

http://www.cq-amateur-radio.com/awards.html

The "Contest Calendar" at the end of this column is presented as a guide only. RAC and TCA do not necessarily endorse or support any of the contests or the accuracy of the information.

Bands: The 30, 17 and 12m bands are never used in any contest.

BIG NEWS FOR CQWW DX

Due to popular demand, a new category has been added to these most popular contests in October and November, SSB and CW. A 24-hour category called "Classic Operator" allows one to start at any point during the overall 48-hour period and put in a total of 24 hours of operating allowing any number of one hour off times. This is called an Overlay Category and is indicated in your Cabrillo file by CATEGORY-OVERLAY: CLASSIC. Classic also means that this category is Unassisted and only one radio can be used (no SO2R). Please note that one hour off does not mean from say 11:00 to 12:00 but either 10:59 to 12:00 or 11:00 to 12:01 as shown in your log. Someone entering this category will also be listed in the main results as well as in a separate listing by High Power or Low Power (which includes QRP). You may operate over 24 hours and this will show in the main listing. It is important to look over these new rules at http://www.cqww.com/rules.htm and also the Rules FAQ at http://www.cqww.com/rules_faq.htm.

There are some other changes of note. A "Rookie" category has been added, similar to that in the WPX contests. The candidate, to be eligible, has to have been first certified as an Amateur less than three years before the date of the contest. For all single operator classes, the minimum number of hours of operation necessary for a certificate has been decreased from 12 hours to 4 hours. For multi-operator stations this minimum has been decreased from 24 to 8 hours. Clubs must enter at least 4 logs, one more than last year, to be eligible for Club Competition listing. Both versions 2 and 3 of the Cabrillo standard can be used for log submission. Version 2 is automatically updated to 3 and is shown that way in the response to your entry. It is a good idea to read the "Judging" section of the rules. Enforcement has gradually become more and more aggressive and it is good to play strictly by the rules.

Please note that the CQWW RTTY contest has a separate set of rules, last revised in 2012. Whatever your choice, enjoy participating in these giants of contesting in September, October and November.

Yes there are others!

One of my favourite contests in the autumn is the California QSO Party. There are 11 other State QSO Parties to match your QTH and time availability. The CQP is somewhat different from many others. Rather than depending on the mobile stations to fill in the multipliers on the map, many of the remote counties are manned Field Day style, sometimes very elaborately equipped and often at very high elevations. In 2012 my log showed only 13 rover-type QSOs out of a total of 892 total QSOs. Contrast this to the Texas QSO Party a week earlier where the mobiles accounted for 137 of the 251 QSOs. It is also fun to play with the Scandinavians (SAC), those stations in the Pacific (Oceania DX) and the Germans (WAG). It is fun to support these more minor contests and the chances of acquiring awards are statistically improved!

73 Bob, VE3KZ

TCA

PENNSYLVANIA QSO PARTY

Call	QSO	Mult	Score	Power
VE9HF	370	63	35,357	HI
VE3TW	226	59	18,123	LO
VA3RJ	78	40	12,680	Q
VE3ZV	175	62	11,050	LO
VE1RGB	126	43	10,836	LO
VA3ATT	121	43	10,806	LO
KD2HE/VE3	50	34	3,600	LO
VA2UTC	45	32	1,640	LO
VA6NJK	21	16	672	HI
VA7ST	12	11	264	LO
VE2KOT	7	7	196	Q
VE3SB	6	6	66	LO
VE2SVF	3	3	9	HI
VE7GM	1	1	1	LO

NEW YORK QSO PARTY

Call	Score	Power	Mode
VE3KZ	20,720	HIGH	MIXED
VE3TW	17,215	LOW	MIXED
VE3GXW	5,343	LOW	MIXED
VA3NPL	3,990	HIGH	SSB
VE2AWR	2,871	LOW	MIXED
VA3RJ	2,448	QRP	CW
VE6BMX	1,102	HIGH	MIXED
VA3GKO	713	LOW	SSB
VA3PAW	408	LOW	SSB
VE3RCN	90	LOW	MIXED
VA7AQD	9	LOW	PHONE
VE7JH	1	LOW	MIXED

WASHINGTON STATE SALMON RUN

Call	QSO	Mult	Score	Class
VE7CV	259	39	28,612	MIX LP
VE3KP	136	31	15,012	MIX HP
VE7IO	116	30	12,620	MIX HP
VE3GXW	112	29	11,614	MIX LP
VE6BMX	102	30	10,360	MIX LP
VA3GKO	53	18	2,408	SSB LP
VE7SAR	16	11	506	MOST
VE2KOT	5	4	80	CW LP
VE7GM	4	4	32	SSB LP

QCWA FALL QSO PARTY

Call	QSO	Mult	Score	Class
VE3BNO	23	15	390	Phone-CQ 100
VA3RKM	12	9	162	Mixed
VE3XK	25	6	150	Phone-CQ 100
VE3CD	9	9	81	Phone
VE3BNO	4	4	32	CW/Digital
VE3CD	3	3	9	Phone-CQ 100
VE3HKG	2	2	4	Phone-CQ 100

CALIFORNIA QSO PARTY

Call	QSOs	Mult	Total	Class
VE3KZ	871	58	121,974	HP
VE7JH	606	57	84,046	LP
VE3CX	440	56	61,824	HP
VA3YOJ	535	57	60,990	LP
VE6AO (VE6TC, VE6CCL)	531	56	59,472	M/S
VE3NR	381	54	51,840	LP
VE3XB	376	52	51,116	HP
VE3KI	291	52	45,474	LP
VE1RGB	298	50	44,700	LP
VE4YU	324	54	43,146	LP
VE6BMX	302	53	43,089	LP
VA7ST	246	53	39,114	LP
VE3IAE	290	49	38,563	LP
VE3OM	254	50	38,175	LP
VE3UTT	245	50	36,825	M/S
VA3YP	324	55	35,695	HP
VA3EC	239	45	32,332	LP
VA3DF	224	49	28,640	QRP
VE4EAR	219	50	27,100	HP
VE9OA	221	50	26,250	LP
VA3ATT	189	46	26,082	LP
VE3RZ	210	46	24,633	M/S
VA3KA	203	48	23,280	HP
VE2AWR	180	46	22,632	LP
VE3XD	130	44	17,226	LP
VE3ZI	132	42	16,695	HP
VE3HG	160	44	16,434	QRP
VE3AD	161	48	15,456	LP
VE7RSV	134	52	13,988	LP
VE3TW	148	47	13,959	LP
VA3GKO	127	46	11,684	LP
VE3TA	96	43	10,599	HP
VE3NE	95	38	9,956	LP
VE3MV	119	40	9,560	LP
VA3MW	97	42	8,463	M/S
VE5BCS	94	42	7,896	LP
VE3JI	84	39	7,702	LP
VA3PC	100	37	7,400	LP
VE3CV	87	36	7,164	M/S LP
VE3NB	97	35	6,825	LP
VE3EK	67	33	6,633	HP
VE3MGY	61	30	5,535	QRP
VA3RKM	60	30	5,445	QRP
VE7GM	70	38	5,358	LP
VA3WR	60	29	5,234	QRP
VE6SKY	56	40	4,480	QRP
VA3FN	52	28	4,368	LP
VY2LI	47	28	3,122	LP
VE3UZ	43	29	3,074	LP
VA3TPS	50	27	2,727	LP
VA7DXC	43	25	2,700	LP
VE5MX	40	23	2,553	M/S
VE1ZA	49	26	2,548	LP
VA3WU	40	27	2,187	LP
VE3GYL	31	27	1,701	LP
VA2UTC	37	21	1,575	LP
VE3BK	31	25	1,550	M/S LP
VE6SLP	39	19	1,482	LP
VE2QV	27	17	1,377	LP
VE3AJ	32	19	1,216	LP
VE3XCM	21	15	630	LP
VA2BOY	11	11	242	LP
VE9HF	6	6	108	HP
VE2FK	5	5	82	M/S

WORKED ALL GERMANY CONTEST

Call	QSO	Multi	Score	Class
VE1OP	597	100	179,100	SOCW HP
VE1ZA	418	100	125,400	SOMIX QRP
VE9ML	379	107	121,659	SOMIX LP
VE1RGB	341	97	99,231	SOCW LP
VE2AWR	266	88	70,224	SOMIX LP
VE3OM	235	81	57,105	SOCW LP
VE9AA	254	71	53,889	SOCW LP
VA3EC	177	71	37,701	SOCW LP
VE3TA	135	67	27,135	SOCW HP
VA3ATT	156	57	26,676	SOCW LP
VO1BBN	118	71	25,134	SOMIX LP
VA3GKO	115	64	22,080	SOMIX LP
VE9OA	98	55	16,170	SOMIX LP
VE1RSM	84	47	11,844	SOCW HP
VE2EZD	65	37	7,215	SOCW HP
VE3ZV	56	41	6,888	SOMIX LP
KD2HE/VE3	34	17	1,734	SOCW LP
VA2UTC	26	20	1,560	SOMIX LP
VE9HF	26	13	1,014	SOCW LP
VE9PLS	21	16	1,008	SOMIX LP
VA3FN	13	9	351	SOCW LP
VE9EX	1	1	3	SOMIX LP

ALL ASIAN DX CONTEST, SSB

Call	QSO	Mult	Score	Class
VE6EX	153	70	10,710	SOAB
VE3UTT	118	88	10,648	SOAB
VE9OA	61	46	2,990	SOAB
VE9HF	50	36	1,800	SO15
VA7ST	47	36	1,692	SOAB
VE7AX	33	25	825	SOAB
VA7BWG	29	25	750	SOAB
VE4YU	20	15	300	SO15
VE2FXL	8	7	56	SOAB
VE2JR	7	7	49	SO20
VA2UTC	3	2	6	SO15

TENNESSEE QSO PARTY

Call	QSO	Mult	Score	Class
VE3KZ	199	125	69,250	SOMIX HP
VE1RGB	109	85	28,095	SOCW LP
VE2EZD	54	44	7,196	SOMIX HP
VE6BMX	51	42	6,526	SOCW LP
VE2FK	19	18	1,026	SOCW HP
VE2KOT	16	13	724	SOCW LP
VA3GKO	11	9	198	SOPhone LP
VE9HF	2	2	10	SOMIX LP

WAE DX CONTEST, SSB

Call	QSO	QTC	Mult	Score	Class
VY2ZM	2,524	1,951	536	2,398,600	SOHP
VE3AT	1,668	1,592	375	1,222,500	SOHP
VE9HF	986	994	279	552,420	SOHP
VA3YP	818	815	224	365,792	SOHP
VE1ZA	519	526	259	270,655	SOLP
VE2FXL	511	525	240	248,640	SOHP
VE2EBK	293	299	191	113,072	SOLP
VE2EZD	214	219	180	77,940	SOHP
VE3UZ	193	193	182	70,252	SOHP
VE3TW	209	210	132	55,308	SOLP
VE9OA	137	138	125	34,375	SOLP
VY2MP	124	124	112	27,776	SOLP
VE5MX	101	99	87	17,400	SOHP
VE3TA	98	100	86	17,028	SOHP
VA2UTC	72	49	73	8,833	SOLP
VA3SWG	93	0	64	5,952	SOLP
VA3GD	70	0	77	5,390	SOLP
VA3TPV	62	0	60	3,720	SOLP
VE9BWK	54	0	59	3,186	SOLP
VO1BBN	34	13	59	2,773	SOLP
VE3RCN	45	0	46	2,070	SOLP
VE3CX	25	0	48	1,200	SOHP
VE3VID	9	0	14	126	SOLP
VE3RDE	6	0	10	90	SOLP
VE3AJ	3	0	7	21	SOLP

CQWW DX RTTY

Call	QSO	Mult	Score	Category	Power
VE7SV	3,389	722	5,892,964	MULTI-OP	HIGH
VE7YBH	3,488	690	5,538,630	MULTI-OP	HIGH
VA2UP	3,091	636	5,063,832	SINGLE-OP	LOW
VY2/WC3O	2,529	536	3,313,016	MULTI-OP	HIGH
VA2AM	2,243	569	3,271,750	SINGLE-OP	HIGH
VE2FXL	1,794	510	2,373,030	SINGLE-OP	HIGH
VE3FJB	1,808	492	2,275,008	MULTI-OP	HIGH
VE5MX	1,664	566	2,184,760	SINGLE-OP	HIGH
VA7KO	1,568	489	1,690,473	SINGLE-OP	HIGH
VE3KI	1,285	484	1,571,064	SINGLE-OP	LOW
VE2AXO	1,339	424	1,464,496	SINGLE-OP	LOW
VE2FK	1,345	392	1,395,128	SINGLE-OP	HIGH
VE5RI	1,429	466	1,302,004	MULTI-OP	HIGH
VA5LF	1,204	450	1,290,600	SINGLE-OP	HIGH
VE3BR	1,073	453	1,197,279	SINGLE-OP	LOW
VE6AO	1,377	382	1,072,274	MULTI-OP	HIGH
VE2SG	994	394	973,180	SINGLE-OP	HIGH
VE3FH	889	424	931,104	SINGLE-OP	LOW
VE2EBK	822	446	912,070	SINGLE-OP	LOW
VE6WQ	1,587	197	792,728	SINGLE-OP	HIGH
VA7RY	777	354	681,450	SINGLE-OP	LOW
VE7CF	900	327	638,631	SINGLE-OP	HIGH
VA7ST	770	352	602,272	SINGLE-OP	LOW
VE2EZD	652	363	599,313	SINGLE-OP	HIGH
VE3KAO	625	346	519,000	SINGLE-OP	LOW
VE3XAT	552	364	498,316	SINGLE-OP	LOW
VE3EY	635	261	445,527	SINGLE-OP	HIGH
VY2SS	1,038	156	410,436	SINGLE-OP	HIGH
VE1ZD	555	272	391,136	SINGLE-OP	LOW
VE7AX	540	304	380,608	SINGLE-OP	HIGH
VE6SQ	527	319	365,574	SINGLE-OP	LOW
VE2LX	534	304	341,088	SINGLE-OP	LOW
VA3MJR	432	275	311,575	SINGLE-OP	LOW
VE3IAE	406	271	278,317	SINGLE-OP	LOW
VE9NC	431	228	250,116	SINGLE-OP	LOW
VY2LI	632	142	219,106	SINGLE-OP	LOW
VE3CV	321	268	217,080	SINGLE-OP	LOW
VE3GYL	371	238	213,486	SINGLE-OP	LOW
VE7KW	416	246	210,084	SINGLE-OP	LOW
VE2ESU	323	248	198,400	SINGLE-OP	LOW
VE3SS	260	280	155,680	SINGLE-OP	HIGH
VE6CMV	276	246	151,044	SINGLE-OP	HIGH
VE7BSM	331	214	145,306	SINGLE-OP	LOW
VA3VF	299	182	135,044	SINGLE-OP	LOW
VE2QV	264	202	128,472	SINGLE-OP	LOW
VA3XH	442	125	113,750	SINGLE-OP	HIGH
VA3XOV	242	200	111,200	SINGLE-OP	HIGH
VA2WA	247	131	86,591	SINGLE-OP	LOW
VE6BIR/3	180	173	81,656	SINGLE-OP	QRP
VE6RFM	241	155	77,655	MULTI-OP	HIGH
VE6BMX	415	87	75,168	SINGLE-OP	LOW
VE4EAR	167	169	75,036	SINGLE-OP	HIGH
VE3XD	254	115	66,930	SINGLE-OP	QRP
VA3FN	169	160	63,840	SINGLE-OP	LOW
VE2KOT	175	156	62,712	SINGLE-OP	LOW
VE7GPK	188	154	60,830	SINGLE-OP	LOW
VE2SB	362	92	59,340	SINGLE-OP	LOW
VA7XB	159	147	56,595	MULTI-OP	LOW
VE7HBS	243	114	51,756	SINGLE-OP	HIGH
VE3CX	133	126	42,840	SINGLE-OP	HIGH
VE3AJ	122	120	34,800	SINGLE-OP	LOW
VE3GTC	121	114	34,542	SINGLE-OP	QRP
VE3HG	115	98	30,772	SINGLE-OP	QRP
VA3UG	108	114	30,552	SINGLE-OP	LOW
VE3MCF	116	98	27,342	SINGLE-OP	LOW
VE6DJT	101	103	23,690	SINGLE-OP	LOW
VA3SB	100	94	23,594	SINGLE-OP	QRP
VE3EP	85	91	19,838	SINGLE-OP	HIGH
VA3PC	125	60	19,140	SINGLE-OP	LOW
VA6NJK	67	113	17,854	SINGLE-OP	HIGH
VE3RCN	79	96	16,704	SINGLE-OP	LOW
VE7NSR	79	88	15,488	SINGLE-OP	HIGH
VE3NE	73	79	14,852	SINGLE-OP	LOW
VE7BGP	72	82	12,710	SINGLE-OP	LOW
VA3KAB	54	65	10,270	CHECKLOG	HIGH
VE3MGY	99	43	7,525	SINGLE-OP	LOW
VE2NMB	59	57	6,669	SINGLE-OP	LOW
VA3TPV	42	60	6,240	SINGLE-OP	LOW
VA7HZ	48	64	5,824	SINGLE-OP	LOW
VE3VID	43	42	5,418	SINGLE-OP	LOW
VE9BWK	40	57	3,420	SINGLE-OP	LOW

SCANDINAVIAN ACTIVITY CONTEST, CW

Call	QSO	Mult	Score	Class
VE1RGB	327	121	67,155	SOAB LP
VE2FK	199	92	28,244	SOAB(A) HP
VY2SS	198	82	23,780	SOAB HP
VE3NR	150	72	15,408	SOAB LP
VE3TA	114	59	12,744	SOAB(A) HP
VE3FH	89	59	9,971	SOAB LP
VE3KAO	102	58	8,352	SOAB LP
VE9OA	72	49	6,468	SOAB LP
VA7ST	73	42	5,922	SOAB HP
VE5MX	91	56	5,432	SOAB(A) HP
K2NV/VE3	59	36	2,484	SOAB LP
VA3DDX	42	23	966	SOAB LP
VE3/YO2GL	27	22	946	SOAB LP
VE3TW	30	24	768	SOAB LP
VE9HF	23	20	740	SOAB(A) HP
VA3GUY	16	12	192	SOAB LP
VE3GTC	13	12	156	SOAB QRP
KD2HE/VE3	11	9	153	SOAB HP
VE2GLA	5	5	25	SOAB LP

TEXAS QSO PARTY

Call	QSO	Mult	Score	Class
VE3KZ	244	130	93,280	SO MIX
VE3OM	194	119	78,758	SO CW
VE1RGB	173	100	57,900	SO CW
VE3GXW	85	62	14,830	SO MIX
VA3EC	61	45	8,735	SO CW
VE9OA	27	22	1,562	SO MIX
VE9HF	16	15	720	SO CW

ARRL SEPTEMBER VHF QSO PARTY

Call	QSO	Mult	Grid	Score	Class
VE3OIL/R	302	105	8	57,750	Rover
VE3ZV	240	134		54,538	SOHP
VA3ST	213	107		34,668	SOHP
VE3WJ	148	76	7	19,532	Rover
VE7JH	214	58		18,270	M/M
VA3ELE	110	43		7,009	SOLP
VE3KZ	132	47		6,956	SOLP
VA3ZV	88	50		5,900	SOLP
VE7FYC	84	33		3,762	SOLP
VE3CRU/R	53	33	2	2,871	Rover
VE3EG	46	20		1,080	SOLP
VE7DAY	30	16		544	SOLP
VE3RCN	30	14		462	SOLP
VE3MMQ (K1TO, op)	25	16		400	SOHP
VE2HAY	19	14		350	SOLP
VE3VZ	17	12		204	SOLP
VE3NYZ	17	5		155	SOLP
VE3IQZ	10	8		80	SOLP
VE1SKY	8	8		64	SOLP
VE2NGH	6	6		48	SOLP
VE3RKS/R	4	6	2	24	Limited Rover
VE3RX	4	4		16	SOLP
VE7BGP	2	2		4	SOLP
VE2PIJ	1	1		1	SOHP

NCJ NORTH AMERICAN OCT SPRINT, RTTY

Call	QSO	Mult	Score	Class
VE3KI	82	31	2,542	SOHP
VE3JI	71	26	1,846	SOLP
VE2EBK	59	26	1,534	SOLP
VE3GYL	55	25	1,375	SOLP
VE3RCN	32	17	544	SOLP
VE6BMX	15	12	180	SOLP

ILLINOIS QSO PARTY

Call	Score
VE6BMX	8,771
VE7CV	6,321
VE3GXW	5,838
VE3PYJ	3,500
VA3GKO	2,280
VA3RJ	2,214
VA3RJ	2,214
VE9HF	1,144
VE2KOT	162
VE2KOT	162

CQ WORLDWIDE DX CONTEST, SSB

Call	QSO	Zone	Country	Score	Category
VE3EJ	9,880	183	688	22,489,220	MULTI-TWO
XL3A	6,682	159	516	11,882,025	SO HP ALL
VE6JY	6,805	170	514	10,392,696	MULTI-TWO
VC2T	4,840	154	564	8,940,536	MULTI-ONE
VE2IM	5,331	147	462	8,362,788	SO HP ALL
VE3JM	5,022	128	412	7,147,980	SO HP ALL
VE6SV	4,516	166	479	6,777,660	MULTI-ONE
VE7GL	4,717	161	444	6,373,675	MULTI-TWO
VE3FWA	2,808	154	534	4,988,688	SA HP ALL
VE3CX	3,002	150	487	4,803,617	SA HP ALL
VE3OI	3,386	136	408	4,778,496	SO HP ALL
VE3BZ	2,703	143	501	4,700,556	SA HP ALL
VC2X	4,070	108	332	4,191,000	SA HP ALL
VE5PV	3,644	140	385	4,120,725	MULTI-MULTI
VD1M	2,720	134	439	4,110,129	MULTI-TWO
VC3X	3,244	121	358	3,959,893	SO HP ALL
VE7SV	2,753	146	407	3,832,290	SO HP ALL
VE3RZ	2,139	145	463	3,513,024	SA HP ALL
VE4VT	2,984	128	365	3,428,322	SO HP ALL
VE3RM	2,220	138	430	3,244,984	MULTI-TWO
VE3MMQ	1,943	135	446	3,124,618	SA HP ALL
VE2GSO	3,115	84	255	2,555,043	SO HP ALL
VE9HF	2,012	106	377	2,265,753	SA HP ALL
VC2B	1,616	117	388	2,238,665	MULTI-ONE
VA3YP	2,182	98	293	2,193,510	SO HP ALL
VE2DXY	2,475	100	314	2,115,126	MULTI-TWO
VE5ZX	2,160	108	291	1,755,201	SO LP ALL
VE2FXL	1,466	109	331	1,728,320	SA HP ALL
VE3LA	1,231	112	361	1,516,438	SO LP ALL
VA7ST	1,773	101	253	1,479,366	SO HP ALL
VY2TT	3,302	37	132	1,433,965	SA HP 15M
VA7OM	1,201	126	320	1,410,698	SA HP ALL
VA2AM	929	125	457	1,318,230	SA HP ALL
VO2NS	1,949	75	225	1,287,600	SO HP ALL
VE3DV	1,301	118	324	1,276,496	MULTI-MULTI
VE3TW	1,134	100	311	1,252,728	SA LP ALL
VE6AO	2,044	92	204	1,194,952	MULTI-ONE
VE9MY	819	119	398	1,181,345	SA HP ALL
VY1EI	2,516	72	148	1,174,140	SO HP ALL
VE3DC	1,544	94	276	1,106,670	MULTI-MULTI
VA3SWG	1,268	84	247	1,065,489	SO LP ALL
VE1ZA	1,038	97	291	1,062,732	SA LP ALL
VA2TG	1,321	88	252	1,034,280	MULTI-ONE
VE7SZ	3,120	34	114	1,003,144	SO HP 20M
VE3XAT	865	97	314	944,889	SA HP ALL
VE2EZD	1,009	85	265	935,900	SA HP ALL
VA6UK	1,577	79	168	914,888	SO HP ALL
VE3CV	850	115	291	911,064	SO LP ALL
VE6BMX	1,405	99	189	870,912	SO LP ALL
VA7CRZ	1,144	98	216	870,408	SO LP ALL
VE9AA	2,139	31	118	860,177	SO HP 10M
VE6EX	1,551	94	174	858,940	SO LP ALL
VE3NB	798	101	289	831,870	SO LP ALL
VA3EC	892	84	262	826,594	SO LP ALL
VE1JBC	986	62	232	807,030	SO HP ALL
VA7BEC	1,053	102	221	774,877	SA LP ALL
VA3WU	960	88	255	735,735	SO HP ALL
VA3DF	770	87	261	732,888	SO QRP ALL
VE3AAQ	1,845	30	113	727,727	SO HP 10M
VE1ZD	824	71	248	726,682	SA LP ALL
VE2EBK	749	82	274	673,196	SO LP ALL
VE1OP	1,586	31	133	631,236	SA HP 10M
VE7IO	810	112	214	581,910	MULTI-MULTI
VE7ABC	887	82	191	568,932	SA LP ALL
VE3GFN	680	84	218	524,876	SO LP ALL
VE6FN	788	80	182	512,734	SO HP ALL
VE3IQ	602	77	237	506,482	SA HP ALL
VA3XH	578	92	231	494,513	SO HP ALL
VE3RRH	642	73	222	471,115	SO HP ALL
VA7FC	1,559	32	98	468,520	SA HP 10M
VA3DX	716	63	177	464,880	SA HP ALL
VE2AWR	629	60	202	439,898	SO LP ALL
VE8GER	869	67	149	433,944	SO LP ALL
VE3OM	557	58	212	423,630	SO LP ALL
VE7BC	769	80	140	417,120	SO LP ALL
VA3ZDX	489	83	217	382,500	SO HP ALL
VO1TA	1,203	29	102	372,302	SA HP 10M
VO1KVT	1,024	28	97	337,875	SO HP 15M
VE7NSR	597	81	163	337,208	MULTI-ONE
VE1JS	546	55	177	334,080	SA HP ALL
VE7ZZF	1,063	33	107	330,960	SO HP 15M
VY2LI	599	70	142	326,692	SO HP ALL
VA3UG	533	66	178	325,984	SO LP ALL
VE7WO	1,245	29	86	315,100	SO HP 15M
VE7TK	447	77	196	308,490	SA HP ALL
VA6AK	333	88	230	269,346	SA HP ALL
VE9OA	456	47	160	267,651	SO LP ALL
VE5UF	875	32	107	266,880	SA HP 10M
VE3KKQ	436	73	193	263,340	SO LP ALL
VE9NC	342	63	207	261,090	SA LP ALL
VE7XF	754	30	101	244,053	SO HP 15M
VE5FX	693	31	109	225,680	SO HP ALL
VA2QR	387	60	164	207,648	SO HP ALL
VA2SG	416	52	145	202,122	SO LP ALL
VE6LB	333	92	156	200,136	SA HP ALL
VA3KA	445	31	124	191,270	SA HP 10M
VE3TU	360	73	127	178,600	SO LP ALL
VE1AL	529	27	97	167,524	SO LP 10M
VA7ZT	274	86	154	162,960	SO LP ALL
VE3VE	423	29	109	161,874	SA LP 10M
VE3SB	307	61	148	161,766	SO LP ALL
VE2HIT	285	72	149	161,551	SO LP ALL
VE3JOC	346	53	137	157,320	SO LP ALL
VE4YU	344	54	113	151,469	SO LP ALL
VA3TIC	333	52	144	150,724	SA HP ALL
VE3OTL	295	66	138	150,552	SO LP ALL
VE4RA	323	72	142	150,014	SO LP ALL
VA3DBT	305	62	136	149,886	SO LP ALL
VE7CV	535	28	86	149,796	SO LP 15M
VE6KD	396	66	107	144,801	SO HP ALL
VE3CR	403	31	102	143,773	SO HP 20M
VO1BBN	263	48	144	137,472	SO LP ALL
VE3AD	256	43	125	116,256	SO HP ALL
VE3HED	258	54	132	115,878	SO LP ALL
VA3ZLT	292	50	114	115,784	SA LP ALL
VE3JDF	235	54	146	115,600	SA LP ALL
VE3RCN	245	57	121	110,894	SO LP ALL
VE7WY	218	56	128	110,400	SO HP ALL
VE3GYL	296	43	106	107,578	SO HP ALL
VE6AX	257	58	100	106,018	SA LP ALL
VA3RNJ	259	47	115	105,624	SO LP ALL
VA2AFH	340	27	96	102,582	SA LP 20M
VA3GKO	221	60	128	102,272	SO LP ALL
VE1BVD	341	26	83	98,754	SO LP 15M
VA3TV	242	39	113	95,304	SA LP ALL
VE6DKC	246	49	109	94,958	SO LP ALL
VE7XS	284	51	103	92,708	SO HP ALL
VA3AH	269	45	116	88,550	SO LP ALL
VE3FH	299	25	84	87,091	SO LP 15M
VE6SQ	274	54	87	81,216	SA LP ALL
VE3NR	175	44	120	80,688	SA LP ALL
VA5LF	203	46	104	79,650	SO HP ALL
VE1SQ	297	25	82	79,287	SO LP 20M
VE7NS	305	25	70	78,755	SO LP ALL
VE6ZC	301	54	63	76,986	SO LP ALL
VE3HG	176	33	111	70,848	SA QRP ALL
VA3XOV	206	60	99	70,755	SA LP ALL
VA3PAW	171	58	115	70,584	SO LP ALL
VE2AXO	198	48	106	68,992	SO LP ALL
VE6KK	240	55	87	66,456	SO LP ALL
VE1SKY	462	15	55	63,210	SA LP 80M
VE9FX	203	47	107	62,832	SA HP ALL
VE9ML	249	18	77	62,510	SA LP 40M
VE7RSV	160	47	86	55,461	SO LP ALL
VE3AJ	188	40	94	54,806	SA LP ALL
VE5SF	226	30	67	51,895	SO LP ALL
VE3TG	210	16	64	47,680	SO LP 10M
VA3MTT	155	49	88	44,525	SO HP ALL
VA3NW	143	43	84	43,688	SO LP ALL
VA3KGS	155	36	71	43,121	SA HP ALL
VE7GPK	176	48	57	42,420	SO LP ALL
VE3BR	382	16	41	41,952	SO LP 80M
VA3YT	168	22	68	38,340	SO LP 20M
VE5BCS	313	20	45	37,375	SA LP 10M
VE5UO	123	38	79	36,855	SO LP ALL
VE6AMI	140	36	63	34,056	SO LP ALL
VE3IDT	125	45	73	33,040	SA HP ALL
VO1BB	152	33	76	33,027	SO LP ALL
VE2JR	105	51	79	31,460	SO LP ALL
VE7SNC	98	62	85	31,458	SO HP ALL

VE9BWK	132	33	66	30,591	SO LP ALL
VA3GUY	151	18	55	30,222	SO LP 20M
VE3FJ	157	20	57	30,184	SO LP 10M
VA3GD	107	44	68	28,784	SO LP ALL
VA3KUG	116	37	71	28,620	SO LP ALL
VE5AAD	185	22	48	27,790	SO LP 10M
VE3PN	364	13	27	27,040	SO HP 160M
VE5KS	151	25	44	26,013	SA LP 10M
VE3XTI	116	30	60	25,920	SO QRP ALL
VE3UZ	107	35	53	23,760	SO HP ALL
VE7WWW	165	21	42	23,436	SO LP 10M
VE7NA	128	39	45	23,016	MULTI-ONE
VE7TVH	131	30	44	23,014	SA LP ALL
VA7JW	104	25	59	22,848	SO HP 15M
VE3TKI	80	32	74	22,684	SO LP ALL
VA7HZ	95	40	52	21,712	SO LP ALL
VE7JMN	102	38	46	20,160	SA LP ALL
VE6TI	103	37	49	19,522	SO LP ALL
VE3RHE	100	31	62	19,344	SO LP ALL
VE2EVN	118	20	49	19,044	SO LP 10M
VA3YV	109	13	48	18,178	SO LP 15M
VA3EEB	83	33	56	16,821	SO LP ALL
VE5CON	86	21	50	15,407	SO LP 20M
VA3WPV	91	17	42	14,868	SO QRP 10M
VA7XB	83	38	40	13,728	MULTI-ONE
VE3FU	80	15	46	13,603	SO HP 40M
VE7JR	78	24	44	13,464	SA HP ALL
VA7BS	94	28	46	12,802	SO HP ALL
VA3TPV	61	29	53	12,546	SA LP ALL
VE3XD	87	17	48	12,480	SA QRP 15M
VE7IN	65	29	46	12,150	SA LP ALL
VE3IKT	76	13	43	11,536	SO LP 10M
VE3MGY	389	6	9	10,560	SA LP 160M
VE3GTC	75	15	35	9,900	SO QRP 15M
VA2MDY	72	15	37	9,880	SO LP 20M
VE3IRR	62	15	39	9,396	SO LP ALL
VA7AM	98	21	18	7,449	SA LP ALL
VA3SRV	60	25	38	7,182	SO LP ALL
VA3RKM	64	26	32	7,134	SO QRP ALL
VE5GC	94	17	31	5,760	SO LP 10M
VE7JH	51	17	27	5,500	SO LP 20M
VE7WJ	69	20	20	5,240	SO LP ALL
VA3WR	41	20	32	4,940	SA QRP ALL
VE3EDY	182	7	9	4,912	SO LP 160M
VE3JEH	64	28	34	4,464	SO HP ALL
VE3PYJ	40	10	25	3,500	SO LP 40M
VE7EPP	35	17	16	2,607	SO HP ALL
VE2XPL	30	12	22	2,210	SO LP ALL
VE7RIJ	36	16	14	1,890	SO LP ALL
VA3BXG	32	16	25	1,312	SO LP ALL
VA7IR	38	8	7	1,245	SO QRP 15M
VA4HZ	20	16	14	840	SO QRP ALL
VE6BHO	27	10	7	782	SO QRP ALL
VE9EX	22	14	19	726	SA LP ALL
VE9PLS	14	8	10	594	SO LP 20M
VA3ZAK	17	8	14	572	SO LP 20M
VA2BBW	16	10	16	494	SA LP ALL
VA3FN	16	9	10	494	SO LP ALL
VE7TI	18	10	10	360	SO LP ALL
VE4DRK	28	5	6	319	SO LP 20M
VE3XCM	8	4	7	220	SO LP ALL
VA3RJ	5	4	5	126	SO LP 15M
VA3JSL	23	10	13	115	SO LP ALL
VE2SVF	5	2	2	40	SO LP ALL

RAC SIMULATED EMERGENCY TEST

The date of the RAC Simulated Emergency Test (SET) has been changed to October 19-20. In Ontario, the Section Managers have agreed to hold their SET on October 26-27. Groups can also hold their local and or District SET on a different day that best suits them between the RAC SET time window of October 12 to October 28.

This nationwide exercise is the chance to test your emergency operating skills and the readiness of your communications equipment and accessories in an emergency-like deployment.

RAC Field Organization Leaders at the Section and local levels, along with many other volunteers who are active in public service and emergency communications, are developing simulated emergency scenarios in consultation with served agencies.

To find out how you can step up and be a part of the local or Section-level activities, contact your Section Manager. You can find contact information for all RAC Section Managers on page 4 of any issue of The Canadian Amateur. Additional contact information may also be found on the RAC website.

The Amateur Radio Emergency Service (ARES) and the National Traffic System (NTS) and members of the RAC Field Organization will participate and practice emergency operation plans, nets and procedures.

The RAC Simulated Emergency Test is an ideal opportunity to demonstrate the capabilities of Amateur Radio. Community and public service agency officials will learn first-hand by taking a role in the SET and by providing an objective evaluation afterwards from their perspective. Have designated stations originate messages on behalf of served agencies. Test messages may be sent simulating requests for supplies. Simulated emergency messages (just like real emergency messages) should be signed by an authorized official.

Formulate your plans around a man-made or natural simulated disaster. Possible scenes could be; a flood, a serious fire, a severe ice storm, a missing person, a serious accident (automobile, bus, aircraft), a broken gas line or any other imaginable disaster. Elaborate on the situation by developing a scenario to be implemented during the SET.

In consideration of local and Section-wide schedules with agencies and many others, RAC Field Organization Leaders have the option of conducting their local or Section-wide SET on another weekend in the fall season. Check with your local RAC Field Organization leadership for the exact date in your particular area. Your help is needed and the RAC SET is a great way to get involved in emergency communications.

For more information on guidelines, preparing and reporting for a SET, forms for RAC Field Leaders are posted on the RAC website at: http://www.rac.ca/en/rac/public-service/ares/simulated-emergency-test/

DARF IS THE DEFENCE OF AMATEUR RADIO FUND

It is a Trust Fund established in the early 90s by the Canadian Radio Relay League to provide financial support for research, and to defray travel expenses of a delegate to World Radio Conferences to defend the Amateur Radio bands.

The Fund is maintained by Donations from individual Canadian Amateurs and from Canadian Amateur Radio Clubs. Donations are deposited in the trust fund account and the fund is administered by the three DARF Trustees.

The trust is entirely separate from, and cannot be used for, RAC financial transactions. Donations may be made by cheque only. Cheques should be made out to “The Defence of Amateur Radio Fund” and may be sent by mail to:

“Defence of Amateur Radio Fund”, 720 Belfast Road, Suite 217, Ottawa K1G 0Z5

Visit <darf.rac.ca> for more information.

CONTEST CALENDAR FOR SEPTEMBER, OCTOBER AND EARLY NOVEMBER 2013

Contest Name	Start	End	Web Address
Colorado QSO Party	1200z 31 Aug	0400z 1 Sept	http://www.ppraa.org/coqp/
Tennessee QSO Party	1800z 1 Sept	0300z 2 Sept	http://tnqsoparty.wordpress.com/rules/
MI QRP Labour Day Sprint	2300z 2 Sept	0300z 3 Sept	http://www.qsl.net/miqrpclub/
All Asia SSB Contest	0000z 7 Sept	2359z 8 Sept	http://www.jarl.or.jp/English/0-2.htm
Russian RTTY WW Contest	0000z 7 Sept	2359z 7 Sept	http://www.qrz.ru/contest/detail/93.html
QCWA QSO Party	1800z 7 Sept	1800z 8 Sept	http://www.qcwa.org/2013qso-party.htm
NA Sprint CW	0000z 8 Sept	0400z 8 Sept	http://www.ncjweb.com/
10-10 Int.Day Sprint	0000z 10 Sept	0000z 25 Sept	http://www.ten-ten.org/
WAE DX Contest SSB	0000z 14 Sept	2359z 15 Sept	http://www.darc.de/referate/dx/contest/waedc/en/
Arkansas QSO Party	1400z 14 Sept	0200z 15 Sept	http://www.arkanhams.org/aqp2013rules.pdf
NA Sprint SSB	0000z 15 Sept	0400z 15 Sept	http://www.ncjweb.com/
ARRL Sept VHF QSO Party	1800z 14 Sept	0300z 16 Sept	http://www.arrl.org/september-vhf
NAQCC Sprint	0130z 19 Sept	0330z 19 Sept	http://naqcc.info/
SAC CW	1200z 21 Sept	1200z 22 Sept	http://www.sactest.net/
ARRL 10 GHz and Up Contest	0600z 21 Sept *	2400z 22 Sept *	http://www.arrl.org/10-ghz-up
South Carolina QSO Party	1400z 21 Sept	0300z 22 Sept	http://scqso.com/rules/
Washington State Salmon Run (Pt. 1)	1600z 21 Sept	0700z 22 Sept	http://www.wwdxc.org/salmonrun/
Washington State Salmon Run (Pt. 2)	1600z 22 Sept	2359z 22 Sept	http://www.wwdxc.org/salmonrun/
CQ WW DX RTTY	0000z 28 Sept	2359z 29 Sept	http://cqww.com/
ARRL EME Contest	0000z 28 Sept	2359z 29 Sept	http://www.arrl.org/eme-contest
Texas QSO Party (Pt. 1)	1400z 28 Sept	0200z 29 Sept	http://txqp.net/
Texas QSO Party (Pt. 2)	1400z 29 Sept	2000z 29 Sept	http://txqp.net/
TARA PSK Rumble	0000z 5 Oct	2359z 5 Oct	http://www.n2ty.org/seasons/tara_rumble_rules.html
Oceania DX SSB	0800z 5 Oct	0800z 6 Oct	http://www.oceaniadxcontest.com/
California QSO Party	1600z 5 Oct	2159z 6 Oct	http://www.cqp.org/
YLRL DX/NA YL Anniversary Party	1400z 4 Oct	0200z 6 Oct	http://ylrl.org/index.php/contests-a-dx-awards
NAQCC Sprint	0130z 9 Oct	0330z 9 Oct	http://naqcc.info/
FISTS Fall Sprint	1700z 12 Oct	2100z 12 Oct	http://www.fists.org/
SAC SSB	1200z 12 Oct	1200z 13 Oct	http://www.sactest.net/
Oceania DX CW	0800z 12 Oct	0800z 13 Oct	http://www.oceaniadxcontest.com/
Makrothen RTTY	0000z 12 Oct	1559z 13 Oct	http://home.arcor.de/waldemar.kebsch/The_Makrothen_Contest/.html
Arizona QSO Party (Pt. 1)	1600z 12 Oct	0600z 13 Oct	http://www.w7yrc.org/az_qso_party.htm
Arizona QSO Party (Pt. 2)	1400z 13 Oct	2359z 13 Oct	http://www.w7yrc.org/az_qso_party.htm
Pennsylvania QSO Party (Pt. 1)	1600z 12 Oct	0500z 13 Oct	http://www.nittany-arc.net/
Pennsylvania QSO Party (Pt. 2)	1300z 13 Oct	2200z 13 Oct	http://www.nittany-arc.net/
NA Sprint RTTY	0000z 13 Oct	0400z 13 Oct	http://www.ncjweb.com/
ARCI Fall QSO Party	1200z 12 Oct	2359z 13 Oct	http://www.qrparci.org/
JARTS WW RTTY	0000z 19 Oct	2400z 20 Oct	http://jarts.jp/rules2013.html
10-10 Int. Sprint CW	0001z 19 Oct	2359z 20 Oct	http://www.ten-ten.org/
New York QSO Party	1400z 19 Oct	0200z 20 Oct	http://nyqp.org/wordpress/
WAG Contest	1500z 19 Oct	1459z 20 Oct	http://www.darc.de/referate/dx/contest/wag/en/
Iowa QSO Party	1400z 19 Oct	2300z 19 Oct	http://www.wa0dx.org/IAQSO/
10-10 Int. Fall Contest CW	0001z 19 Oct	2359z 20 Oct	http://www.ten-ten.org/
Stew Perry Topband Challenge	1500z 19 Oct	1500z 20 Oct	http://www.kkn.net/stew/
Illinois QSO Party	1700z 20 Oct	0100z 21 Oct	http://www.w9awe.org/index.html
CQWW DX Contest SSB	0000z 26 Oct	2400z 27 Oct	http://cqww.com/
ARRL EME Contest	0000z 26 Oct	2359z 27 Oct	http://www.arrl.org/eme-contest
Ukrainian DX Contest	1200z 2 Nov	1200z 3 Nov	http://www.urdxc.org/
ARRL SS CW	2100z 2 Nov	0300z 4 Nov	http://www.arrl.org/sweepstakes
10-10 Int. Fall Contest Digital	0001z 9 Nov	2359z 10 Nov	http://www.ten-ten.org/
WAE DX Contest RTTY	0000z 9 Nov	2359z 10 Nov	http://www.darc.de/referate/dx/contest/waedc/en/
JIDX Phone Contest	0700z 9 Nov	1300z 10 Nov	http://jidx.org/jidxrule-e.html
OK/OM DX Contest, CW	1200z 9 Nov	1200z 10 Nov	http://okomdx.crk.cz/

*Note: In the above chart an * indicates Local Times*

SECTION NEWS

THE RAC FIELD ORGANIZATION FORUM

MESSAGE FROM THE RAC CHIEF FIELD SERVICES OFFICER

As I write this Message, summer is in full glory with record breaking 32° temperatures here in St John's, sending folks off to any cool water they can find. This is the time of year to "charge your batteries" and spend quality time with loved ones.

Alberta floods

I would like to congratulate our friends in Alberta for a successful deployment to aid with the serious flooding throughout Alberta.

They spent four long days and nights passing traffic all over the region as conventional communications were overloaded or absent.

Congratulations folks, well done! Please see the Public Service / ARES column on page 42 for more information.

Simulated Emergency Test

This year's Simulated Emergency Test (SET) has been rescheduled to October 19-20. I realize that it is the same weekend as Jamboree On The Air, but the other alternate dates were interfering with Thanksgiving and the RAC Annual General Meeting.

Groups are encouraged to do their SET on any convenient weekend. Please see page 54 for more information and visit the RAC website for a complete set of rules for the event.

On air bullying

Incredibly, I'm still told of instances of "on air" bullying. Friend turned against friend, Clubs turning their back on long-time members, are all disappointing examples of bullying. There is no place in the Amateur Radio Service for this behaviour so if you are guilty of it – or know someone who is – please do your best to put a stop to it.

Please keep the news items coming. I still have ARES crests available in both languages and our ARES deployment vests are still in good supply. Are there other items that you would like to see? Drop me a note.

Doug Mercer, VO1DTM CEC Chief Field Services Officer

CHIEF FIELD SERVICES OFFICER
Doug Mercer, VO1DTM
Box 1042
84 Main Road
Goulds NL A1S 1H2
Tel. 709-364-4741
Email: vo1dtm@rac.ca

BRITISH COLUMBIA/ YUKON:

SM Paul Giffin, VA7MPG
A/SM Ron McFadyen, VY1RM
A/SM Neil King, VA7DX
STM Al Ross, VE7WJ
SEC Fred Orsetti, VE7IO
SEC Terry Maher, VYIAK (Yukon)
OBM Bill Foster, VE7WWW
OOC: Dennis Wight, VE7IJJ
ACC: Karla Wakefield, VA7KJW

MAY-JUNE SM REPORT:

This will be a short report as I have been away from home since mid-May. Being on the north and central coast as well as part of Alaska, it has been nice to be "unconnected" for a while.

It would appear there was more activity across BC this Field Day. I would like to thank Mike Hale, VE7GN (retired BC/Yukon Section Manager) for his assistance in relaying messages to me on Field Day. I have replied to all messages I received.

The folks in the Yukon report they have their D-Star system in Whitehorse up and fully operational. It has been a bit of a learning curve, but I am glad to see they hung in there and are now operational.

The last item, and probably the most important, is the group of operators around the Province who forward both the RAC HQ bulletins and the Section Bulletins.

Under Bill Foster, VE7WWW, these individuals provide ongoing and valuable support to RAC and the BC/Yukon Section.

To each of you I say thank you very much for your efforts and your interest. Both are truly appreciated. In May this group forwarded 47 bulletins and in June they forwarded 93 bulletins.

Lastly, I would like to apologize to the Delta Amateur Radio Society for the error in the my last SM Report regarding the sponsorship of the "Under 20 Club" and our inference that it is an Emergency Preparedness Net.

– 73, Paul, VA7MPG

Public Service Honour Roll
May:
VE7WWW 106, VA7MPG 126 and VE7GN 170.
June:
VE7WWW 121, VA7MPG 75, VE7GN 170 and VE7WJ 100.

Bulletins:
May 47
June 93

ALBERTA:

SM: Garry Jacobs, VE6CIA
SEC: Curtis Bidulock, VE6AEW
STM: Jack Humphries, VE6JRH
OOs: Tom Martens, VE6TRM
Don Momen, VE6JY

MAY-JUNE SM REPORT:

On May 12, wildfires forced the evacuation of the town of Nordegg which required a call to the Canadian Red Cross to set up a shelter in Rocky Mountain House to assist evacuees.

ARES was activated to assist with the response and crossband vehicle repeaters were set up by Jeff, VA6JL, to allow handheld communications inside the building to nearby repeater VE6VHF. Five out of seven Red Cross responders on this deployment were certified Amateur operators. Thanks to all who participated.

On June 19, Red Deer County conducted a functional emergency management exercise to test their overall emergency management. The exercise was a severe weather event (tornado) impacting a rural residential subdivision and the nearby Village of Delburne.

The aim of the exercise was to practise the County's Incident Command System (ICS) for an incident with two sites in different jurisdictions while dealing with evacuees.

The objectives of the exercise were to facilitate communication, coordination, information management and teamwork.

The exercise tested and evaluated their internal staff notification system, the Emergency Coordination Centre facilities as well as the County's municipal emergency management plan.

Participants in the exercise were Red Deer County Emergency Coordination Centre staff, the Fire Department, the RCMP, County Community Peace Officers, County Technical Rescue Task Force, Amateur Radio Emergency Services, Alberta Health Services, FortisAlberta, ATCO Gas, EPCOR Water, Civilian Air Search and Rescue Association and AEMA Field Officer.

On June 11 the Regional Municipality of Wood Buffalo declared a state of local emergency (SOLE) due to heavy rain and flooding. The rivers in the area were dangerously high and some had caused damage.

On June 20, ARES was activated to assist with communications due to floods in High River, Turner Valley and Eckshaw. That was the start of the worst declared disaster in Canadian history. The Canadian Red Cross ended up with 91,400 registered evacuees needing assistance in Southern Alberta.

Amateur Radio played a big role as can be seen in the articles provided in the Public Service / ARES column on page 42.

– Garry Jacobs, VE6CIA

MANITOBA:

SM: Jan Schippers, VE4JS
STM: Jan Schippers, VE4JS
SEC: Vacant
DECs: Jeff Dovyak, VE4MBQ (Capital Region and CanWarn);
Gord Snarr, VE4GLS (South-East Central Region / South-West Region);
Wayne Warren, VE4WR (North Region and Special Projects);
Vacant (North-Eastern Region);
Vacant (North-West Region);
EC Ron Wlliscroft, VE4QE (Selkirk and District);
Bill Boskwick, VE4BOZ (for RM of Grey, RM of Dufferin & Town of Carman)

MAY-JUNE SM REPORT:

Summer is here and that means severe weather. CanWarn Net Control goes from May 13 to September 8 and Volunteer Net Controllers are on call 0930-1730h & 1730-2130h daily.

The Manitoba Marathon was held on June 16 (Father's Day) and again Amateur Radio played an important part. Many thanks to Jeff Dovyak, VE4MBQ, for organizing 92 volunteers from different clubs to come together to do an excellent job once again.

Thanks to Chief Instructor Ryan, VA4MAC, who ran a successful Basic Short Course 4 with nine out of 11 students passing the final exam.

A successful Field Day was held on the grounds of the Canada Mennonite University. This year the supper was catered out to Sevala's Deli and Catering with the Winnipeg Amateur Radio Club covering half the cost. Thanks again to everyone who made this an excellent event.

Winnipeg ARES
Jeff Dovyak, VE4MBQ

Twenty-four Winnipeg ARES members and affiliates participated in a tour of the STARS Base on Wednesday,

May 15. Towards the end of our session STARS7 received a call to attend an accident scene west of Winnipeg. It was interesting to see how fast the team moved in a very organized manner to get the helicopter out of the hangar ready for launch.

ARES attendees were: VA4AJG; VE4s: HQ, GMB, TRO, SYM, MBQ, ANF, JNF, DWG, MWH, EIH, KAZ, HK, CDM, GMT, GWN, YYL, SBS, GKS, DJS, PH, PEH, DLA and Jeffrey Kazuk. Craig Martin, VE4CDM, coordinated the ARES operation for the RCAF Run on Sunday, May 26. Approximately 20 ARES members and affiliates participated. Thanks to Bruce Johnson, VE4KQ and Wayne, Warren, VE4WR for allowing us to utilize the VE4AGA and VE4EDU repeaters for this operation. Thanks to Jim Sutton, VE4SIG, for being the Winnipeg ARES Duty Coordinator from May 25 to 30 while I was at an out-of-province work-related conference. Thanks also to Glen Napady, VE4GWN, for programming the ID-1 1.2 GHz radios for VE4EOC, VE4EMO and VE4PSC.

On May 22, 15 long-serving Amateurs, who have continuously volunteered for the Manitoba Marathon and have been volunteering for over 20 years, were recognized with approximately 50 other long-serving Marathon volunteers during a reception at Government House as part of the Marathon's 35th Anniversary celebrations. The Amateurs recognized were: VE4s HK, HQ, NQ, SE, ACX, AJO, DWG, EAR, GLS, HAY, MBQ, MHZ, RST, TRO and XYL (see page 48).

ARES-Report for the North Region and Special Projects
DEC Wayne Warren, VE4WR,

VE4PSC, the ARES emergency station at Public Safety Canada is back in service from the Radio Room, 6th floor at 363 Broadway. HF power is limited to 100 watts initially, later available at 500 watts. The digital UHF radio will be active this summer at VE4PSC paired with ID-1s at VE4EMO and at VE4EOC.

VE4ARES repeater (443.225 MHz with +5 MHz offset and 127 Hz tones) is currently erratic and needs service. Do not plan use of this repeater until normal operation is restored.

When travelling in the Flin Flon-The Pas-Deschambault-Sherridon area, use the super wide area repeater network based in Flin Flon (call sign VE5ROD in honour of silent key Rod). The Flin Flon VHF repeater operates on 146.94 MHz with -600 kHz offset and 127.3 Hz access tone.

– Jan Schippers, VE4JS

Traffic Totals
May: 10
June: 6

ONTARIO NORTH:

SM: Al Boyd, VE3AJB
Email: ve3ajb@vianet.ca
STM: Pat Dopson, VE3HZQ
Email: dopsonp@vianet.ca
SEC: Dave Hayes, VE3JX
Email: ve3jx@bell.net
OBM: Paul Caccamo VA3PC
Email: va3pc@ciinet.org
Website: http://ontario.racares.ca

MAY-JUNE SM REPORT:

This summer flew by and many groups were involved with various community events. Amateur Radio and ARES proved itself many times over. From the floods in Alberta to the train derailment in Quebec and the flash floods in Toronto, this past summer many Amateurs jumped in and provided very vital communications. Having pre-plans in place is essential to effective communications in times of emergency. I want to thank all the Amateurs who participated in these times; it sure shows how Amateur Radio works in times of need.

Albany District
SEC Dave Hayes, VE3JX

This was the inaugural Field Day in using the new Section identifiers for Ontario. Our ONN designation was often appreciated by those we contacted. It seems that Field Day was well-attended throughout the Section, and I hope all groups had a wonderful time participating in it. There is actually a category for EOC stations so that might be something for location consideration in the future.

As you read this, we will all be getting ready for our Simulated Emergency Test this fall throughout the Province. Hopefully, we will be able to communicate with the PEOC this year. We are also hoping, as Fred mentions in his report, that we will be able to establish digital communications with the PEOC in Toronto. Thank you all for your ongoing participation in ARES.

Sault Ste Marie & Area:

A successful CanWarn exercise was held in May and several ARES members were among the attendees. This year's Field Day (FD) utilized members from both the Sault & Area ARES and the Echo Bay & Laird ARES groups, with EC Dave Campbell, VE3EGC, taking the lead in securing the site at the Laird Fairgrounds. EC Brent MacMillan, VE3OTL, of the Sault group also provided one of the trailers for the event. A neat feature of the antenna structure was the use of an extension ladder – lashed to a wooden fence – as a centre support for the wire antenna system.

Echo Bay & Laird Township:

Dave Campbell, VE3EGC, EC for Echo Bay & Laird, reports: This June saw a successful Field Day exercise sponsored by the Algoma ARC and organized by me and attended by 14 club members including SEC VE3JX. All antennas were erected that morning and all TX & RX equipment were run from a generator. Many of the members regularly participate in local emergency exercises.

Elliot Lake:

EC Davis Sutherland, VE3SUT, reports: Field Day was held at the lookout tower again this year and we operated PSK31, RTTY and Sideband. We had our Mayor and his wife come to visit, plus a couple of bears as an added attraction.

In addition, our club helped with communications and traffic control for the City parade and we had 12 of our members and four other helpers to cover the parade.

Sudbury: EC Alan Viitala, VA3AJV, reports: I would like to thank the few ARES operators who joined me and volunteered their time for the annual Relay for Life held in Sudbury on June 21. The rain held off for about half the event but at least temperatures were much warmer than last year! Thank you to Jenny, VE3HLP, AEC Wayne, VE3THN, Ed, VE3VPD, Adam, VA3AIO and Real, VE3ZDK. We deployed and tested our portable field repeater for better coverage because simplex was proving to be spotty over the large area containing the track and various parking lots. The repeater and telescopic mast went up fairly quickly and the machine worked very well! Thanks also to AEC Wayne for fixing up the repeater and for purchasing the rope and other supplies to go with the setup! Very nicely done!

Efforts to keep a local ARES net running have proven to be very difficult with little to no participation so it looks like I may have to give it up for now. Recruitment and retention of new members is also a challenge and remains at the top of my priority list. Providing help at events may have to be put on hold until we get more members or more participation or both.

I am continuing to maintain liaison with City of Greater Sudbury Emergency Management and I hope to get some group participation in an upcoming shelter exercise this fall. It would be the first of its kind in the area and would be very beneficial for all ARES personnel given the increase in natural disasters.

Killarney DEC Stiig Larson, VE3LBX, reports: Amateurs attending the Sudbury CanWarn session included Ward, VE3WGK, Ed, VE3VPD, Al, VE3AOF, Dave, VA3NCS and Stiig, VE3LBX). Ward briefly discussed Amateur participation in CanWarn during the session.

Manitoulin and North Shore:

EC Jim McLean, VE3LJM, reports: Several Amateurs from the Club travelled to Dayton, Ohio to attend this year's Hamvention and met up with the gang at the RAC booth. It was great to see and talk with the RAC reps.

CanWarn training was held on May 26, with the following club members attending: Allan Boyd, VE3AJB ; Paula Corbiere, VA3PCZ; Clara Corbiere, VA3NSH; Archie Corbiere, VE3ACZ; Karen Genereux, VA3KCG; Marshall Maciuk, VA3NOD; Michael Maciuk, VE3UKI; Jim McLean, VE3LJM; Lorraine McLean, VE3LMJ; Dave Montgomery, VA3DYM; and Sharon Montgomery, VA3SMM. Thanks to Peter Kimbell from Environment Canada for a great presentation.

Magnetawan DEC Paul Caccamo, VA3PC, reports: the North Bay ARC plans to operate VE3NBC from the top of Laurentian Ski Hill in North Bay.

Amethyst DEC Fred Lesnick, VE3FAL, reports: The Northwest continues to move forward with the digital readiness with VE3ONN now on both 40 and 80 metres using WL2K as a link. We have links that will go to Kenora and the remainder of Northern Ontario. We play with digital NBEMS nightly, daily and beyond with WL2K on two assignments on HF and have local mailboxes that do not rely on the Internet that we can use in the event that we lose the phones, cells and landlines. With respect to digital communications, we in the North have moved further along and have been running some very reliable digital networks. Unfortunately, during SETs we have no digital comms with the HQ in TO; this is something the south needs to work on.

– Al Boyd, VE3AJB

DECs reporting:
VA3s: PC.
VE3s: LBX, JX, FAL.

ECs reporting:
VA3s: AJV and SPT.
VE3s: LJM, SUT, RQR, JX and MXJ.

Public Service Honour Roll
May: VE3HZQ 95
June: VE3HZQ 95

Official Bulletin Stations
OBM Brad Rodriguez, VE3RHJ
VA3BIX, VA3RRZ, VA3STG, VE3GIO, VE3JUZ, VE3KII, VE3SHM, VE3VBR, VE3VY.

Official Observer Report
Norm Bell, VE3XRC

Total hours monitoring:
May 18; **June** 13
Good Op Notices sent:
May 0; **June** 2

ONTARIO SOUTH:

SM: Ian Snow, VA3QT
SEC: Vacant
SBM: Brad Rodriguez, VE3RHJ
STM: James Davidson, VE3TPZ
Website: http://ontario.racares.ca

MAY-JUNE SM REPORT:

The major event during the period was Field Day, which I spent with my home club (Barrie ARC).

For the first time I focused exclusively on digital messaging using the Winlink system. The positive side of the experience was how rapidly an extensive a group of stations were interconnected. A total of 40 formal messages were handled, most in radiogram format and a few in FD exchange format. From the ARES perspective, the major lesson learned was the need for a common procedure or protocol for managing message movement between the originator/recipient and the station operator. It's a new world when exchanging messages electronically and one doesn't have a built-in capability to annotate the unique message number and service info directly on the computer. The second lesson was how difficult it is to "wring out" a packet radio setup when a traditional node is unavailable and an Internet connection is available (the point of Field Day?) to remotely service the gateways. Both HF Pactor and D-RATS were available had it been a "real world" event.

The project to move Field Service monthly reports to the RAC server has been beset by gremlins but we are making progress. The end-state goal is a capability where the EC or other local Field Service official can make a report using a smartphone or computer and the information is automatically routed to the RAC managers who need it in a collated format. In the meantime, ECs should send a duplicate email report to me at va3qt@rac.ca to ensure that your group's activities are recognized in TCA.

In conjunction with the Hamilton Hamfest and RAC Annual General Meeting on October 5, there will be a "Section Manager's Town Hall" in Room B, Marritt Hall at 11 am. The session is open to all Ontario-South Amateurs and will start with a short SM progress report followed by an open Q&A format; no question too difficult.

I am looking for volunteers to fill the following Assistant Section Manager positions: SEC, Public Relations, Club Liaison and Technical Coordinator. If you'd like to be part of an inclusive, positive-change team, this is your opportunity. Desire to serve more important than experience, mentoring available.

I would like to close these remarks with a sincere thank you to the Bulletin Stations who so faithfully support "getting the word out". The acknowledgement at the bottom of the report is all that TCA space allows, but know that your service to the Amateur community is valuable beyond measure.

Activity Reports

STM James Davidson, VE3TPZ, reports that he and four members of the Stratford/Perth County ARES (Dean, VA3DBD, Jim, VA3JRH and Ben, VE3OLS) have started a working group learning to use Winlink on 40m (WINMOR) and 2m (Packet). They are looking for other participants in Huron and Perth counties to experiment with peer to peer operations. Laurentian Net Reports for June are unavailable, the Net Manager's computer died.

Bruce County EC Tim Eaton, VE3RTE, reported that eight Amateurs assembled at the Port Elgin EOC for Field Day on June 22, made "numerous" contacts on 20m, and checked out the station's equipment as serviceable.

On May 15 Stratford/Perth County EC Allé Brandier, VE3CWL, accompanied by AEC Dean VA3BDB, met with the Perth County CEMC to discuss comms support to the International Plowing Match. It was learned at the meeting that a number of residents with fibreoptic telephone service lost it during a three-day power outage; the local battery is only good for eight hours.

On May 16, Allé met with new North Perth Fire Chief Ed Smith to brief him on ARES operations and give him a tour of the Mitchell repeater. Assisted by Dean and Tom, VE3KVD, they swapped out the St Mary fire hall antennas for dual band models. On June 27, Alle again met with Chief Smith to arrange the replacing of the 2m antennas at the Atwood, Monkton, and Listowel fire halls.

EC Wayne McLean, VE3WWM, reports that Dufferin ARES provided weather spotting support for the May 25 Grand Valley Duck Race as well as mounting an Amateur Radio public display. Their Basic Course was completed on June 24 with five new Amateurs joining the hobby. The group set up for Field Day at the Orangeville Canadian Tire, made 203 contacts, and received many Amateurs and members of the general public.

Barrie and South-Simcoe ARES EC Pat Barrett, VE3RNH, reported that Barrie's CEMC Bruce Griffin, VA3BLG, was "downsized" and the role reassigned to the Fire Chief. Bruce was extraordinarily supportive of the ARES Group, making provisions for a dedicated radio room with a full spectrum of radio equipment in the new Fire Headquarters, and providing BEM training for the senior ARES leadership team. He will be sorely missed. Several group members participated in the Barrie ARC Field Day held on the grounds of the South-Shore Community Centre (the bride approved the quality of the radio installations and reported no interference to her DJ's sound system.)

– Ian Snow, VA3QT

DECs reporting: VE3RHJ

ECs reporting: VE3RTE, CWL, WWM, RHJ and RNH.

OBS reporting: VA3STG, VE3GIO, VBR and XTA.

Traffic Totals:
May: VE3RHJ 14, VE3TPZ 17
June: VE3RHJ 13, VE3TPZ 17

Public Service Honour Roll:
May: VE3RHJ 73, VE3TPZ 71
June: VE3RHJ 74, VE3TPZ 107

ONTARIO EAST:

SM: Michael Hickey, VE3IPC
Email: ve3ipc@gmail.com
SEC: Vacant
STM: Vacant
OBM: Brad Rodriguez, VE3RJH
Email: ve3rhj @ rac.ca
Website: http://ontario.racares.ca

MAY-JUNE SM REPORT:

This year's Ontario ARES SET is set for October 26, as agreed by all Ontario Section Managers. This came about as a result of July's Ontario Council of SMs teleconference where many items of importance were discussed including this year's SET. The 26th was chosen rather than the 12th because that is Thanksgiving Day in Canada and JOTA weekend is on the 19th. The SET info is circulated in the Ontario Bulletin System and by now you should have read all the details. With that said, groups can also hold their local and or District SET on a different day that best suits them between the RAC SET time window of October 12 to October 28. It's always a good idea to have a theme or identified set of goals to achieve, with a review followed soon after on lessons learned and should be reflected in your monthly ARES activity report. For more information see the article on page 54 and please visit https://www.rac.ca/en/rac/public-service/ares/simulated-emergency-test/ to find the Section Emergency Test (SET) Report Form. May your SET be a learning and rewarding group experience.

On May 25 I was happy to attend this year's Eastern Ontario ARES District meeting in Rockland Ontario as the SM. I had the opportunity to give my presentation with info regarding our Section and I gave a brief talk on the need for each ARES group to exercise their ARES District Mutual Aid Plan, as soon as possible on the local level, and with adjacent groups to gain the much needed experience. Without experience groups risk not being able to serve their clients effectively when ARES EmComm is needed the most. Version 3.0 of the DMAP manual has been adopted and is soon to be released by the DEC. A separate document called the "DMAP Contact with RPT & Packet info list" is updated each year and sent by the DEC to the group coordinators within the ARES District.

This year I was able to attend the June 15 annual meeting of the Champlain Regional Repeater Association (CRRA RPT group, http://www.homefixall.ca/VE3STP/) in Renfrew Township. The highlight is that this group has made a firm commitment to having their CRRA membership belong to a local ARES group and to take the ARES training course and exercise before the annual SET, as soon as this can all be arranged.

There are lots of worthy reports to read below folks! That's it from me.

Eastern Ontario ARES District report:
Submitted by the Eastern Ontario ARES DEC Lance Peterson, VA3LP

DEC Lance Peterson, VA3LP, held his annual district meeting on May 25 at the Council Chambers of the City of Clarence-Rockland. This is late this year and it was difficult to find a date when most of the groups were not involved in support of local events. Since the main discussion was about Outpost for packet radio, it was decided to go ahead with the meeting on the 25th and ensure that all groups would receive a report on the outcome. This detailed report is due out very shortly.

The meeting was attended by 14 ARES members of local groups including the SM for Ontario East Michael Hickey, VE3IPC, who provided his report. Each of the attending groups provided their group activity updates. The Eastern Ontario DEC began a discussion on the SOP changes to the District Mutual Aid Plan (DMAP) manual and the Groups agreed to all the changes. There will be a new issue of the document V3.0.

Next Peter Gamble, VE3BQP (previous Ottawa ARES EC) presented the proposed and existing packet system in the District. He proposed a guideline for standardized implementation of packet nodes to ensure reliable connections between the groups.

Next was a short brief on Outpost and how it works. Then the DEC introduced the group to ICS213 Message Manager. He spoke about the capability of the program to put the message formation in the client's hands and with a push of the send button send the message to the Outpost software on the packet connected computer for onward transmission by the operator to the correct packet station. The group was broken into two groups of three computers, each with a specific client designation. They then formatted messages and sent them to each other. The system worked, however the packet station operators quickly became bogged down and the operators were a bottleneck to the operation.

Discussions after the demonstration led to the following conclusion. At this time the attending group leadership members could not suggest this to their clients unless

the bottleneck can be overcome. They did indicate that they believed that a solution was to have Outpost run directly on the client's computers and direct them to send to a central Outpost connected to a packet station and that the onward transmission would take place automatically without operator input. This suggestion and an investigation into the bottleneck issue will be reviewed this summer and a possible solution provided in the fall. More to come.

The ARES District meeting was a success with a reiteration of the necessity for mutual aid and that the groups need to seek support from other groups, not just for emergencies, but also when they are involved in support of local community activities.

DEC Lance Peterson VA3LP, as well as being involved with Field Day with the Prescott-Russell ARES group, travelled up earlier in June to Renfrew Township to attend the annual Champlain Regional Repeater Association (CRRA) meeting. There they expressed a firm renewed commitment to support ARES throughout the valley as their repeater VE3STP has a very long-range capability and is used by many ARES groups in the District. They also reinstated their packet digipeater to ensure coverage for the ARES Groups in support of the Red Cross in the valley back to their HQ in Ottawa. Their Executive expressed their desire that all members of the RPT Club should be an ARES member as this was the future for Amateur Radio. The DEC provided their Executive information on who to contact depending on what area the club members resided and promised to provide support any way he could. The DEC also indicated his willingness to repeat the ARES training course and the exercise, as done in Renfrew County in May 2010.

Eastern Ontario ARES District group reports:

Lanark/North Leeds (LNL)-ARES Group
Submitted by LNL-ARES AEC Norm Hagan, VE3VY

On May 8, the Lanark/North Leeds (LNL)-ARES Group participated in the 12th launch and flight of VE3MW-11, a high altitude Amateur Radio balloon as an educational project for St. John Elementary School in Perth. While VA3ZKS, VA3KAI, EC VE3BSB, VA3LFP and VE3JDJ were in attendance, the balloon was prepared, fuelled with helium and launched by the students. For more information please see the article on page 46.

The Lanark/North Leeds (LNL)-ARES Group participated as usual in the Ottawa-Kingston cycle tour on June 8-9. There were 15 Amateurs that took part.

The LNL-ARES also took part in the Perth Kilt Run on June 22 and about eight Amateurs took part. Successful fundraising for improvements to VE3REX-7, the Westport digipeater/node, occurred with organizations in Rideau Lakes Township and Westport.

Ottawa ARES/EMRG Group:
Submitted by AEC Mike Kelly, VE3FFK, reporting for Richard, VE3UNW, Ottawa ARES EC/EMRG team leader

In addition to the usual monthly test of our repeaters, this May the members of the Ottawa ARES/EMRG Group also assisted with safety communications at the Lanark Highlands forest rally, the CN Cycle for CHEO (Children's Hospital for Eastern Ontario) and the ARES District meeting.

The May RPT test was conducted by Dave, VE3KMC and Ron, VA3ACZ. Peter, VE3BQP, has put in yet more work to ensure the BBS systems are in good shape, with more to come.

On Saturday, May 4, the Lanark Highlands Forest Rally was assisted by 33 Amateurs, of which the following are EMRG members: Tyler, VA3DGN, Harold, VA3UNK, Margaret, VA3VXN, Mike, VE3FFK, Heidi, VE3HHP, Rick, VE3IHI, Gord, VE3XGP and Alan, VE3ZTU.

On Sunday, May 5, Ron, VA3ACZ, Arthur, VA3BIT, Tyler, VA3DGN, Jamie, VA3JME, Harold, VA3UNK, Christine, VA3VAK, Margaret, VA3VXN, Paul, VE3CPH, Mike, VE3FFK, Dave, VE3KMV, Heidi, VE3HHP, Stuart, VE3SMF, Richard, VE3UNW, VE3XGP, Gord, Glenn, VE3XRA, Alan, VE3ZTU (and perhaps others I've missed) assisted with safety and other communications for the CN Cycle for CHEO. As mentioned previously, a part of our participation consisted of sharing the knowledge we acquired over the past several years with a new group of organizers. Once again, having APRS on bicycle mobile stations was especially helpful and having two different events on consecutive days was a challenge.

Lastly, Tim, VA3PYC, Harold, VA3UNK, Peter, VE3BQP, Mike, VE3FFK, Dave, VE3KMV, Mike, VE3KOY, and Richard, VE3UNW, participated in the ARES district meeting on May 25. Much of the meeting was spent on familiarization with the Outpost software, which was widely recognized as the software to use for BBS operation. It seems different groups use the software in slightly different ways, but all saw the merit in bringing members "up to speed" on Outpost for both interoperability and mutual aid exchanges. Some work was done to ensure that each group knows how to contact their neighbours via packet. The mutual aid plan was finalized (to the extent that any emergency plan can be).

HELP WANTED: ONTARIO EAST SECTION LEADERSHIP MANAGEMENT POSITIONS AVAILABLE

Section Emergency Coordinator (SEC): The Ontario East Section Manager (SM) is looking for someone with previous experience as a District Emergency Coordinator (DEC). The ideal candidate will be someone who has been a DEC and was also an EC (group coordinator) before that with several years of experience. Consideration will also be given to an experienced and dedicated ARES group coordinator (EC) who understands the bigger picture of ARES and who lives within this Section.

This position requires someone with leadership skills, self-motivated, personable and is at ease with contacting the DECs and ECs by phone and/or by email from time to time as required. This position requires some administration and organizational abilities. As the new ARES SEC you will benefit from the work already done by the previous SEC and from the SM's years of ARES management experience. Much of the groundwork has been done, but more work is needed. Interested applicants regarding this responsible ARES leadership position should contact the SM directly at 613-679-4474 or <ve3ipc@gmail.com>.

In addition, the Ontario East Section Manager is looking for two candidates to become Assistant Section Managers: one as the Section Affiliated Club (Liaison) Coordinator and one as the Section Technical Coordinator.

The **Affiliated Club (Liaison) Coordinator** management role will be to assist clubs with internal administration advice where appropriate and consistent with the Affiliated Club President's Workbook, assist club's with keeping club contact information current on the RAC website, promoting joint club activities and programs across the Section, and encouraging clubs to join RAC as an Affiliated Club. As the Club (liaison) Coordinator you will seek to promote and work with each club liaison person in each club within this Section as each club liaison volunteer is identified and comes on board.

The **Technical Coordinator** management role will be to facilitate club and local Technical Specialist involvement in RAC technical committee activities, to facilitate responses to Industry Canada papers and enquiries, and to assist with questions of spectrum management or interference.

For more information regarding the SEC position or the Assistant Section Management (ASM) positions, please contact SM Michael Hickey at <ve3ipc@gmail.com>.

– Michael Hickey, VE3IPC, Ontario East Section Manager

The Ottawa ARES/EMRG Group June RPT test went well, with Dave, VE3KMV, conducting with assistance given by Ron, VA3ACZ, AEC Mike, VE3FFK, Arthur, VA3BIT, Jamie, VA3JME, Sandy, VE3AAC, and Roger, VE3NPO, participating. The EMRG BBS and the Winlink node on 145.030 are both getting used most days and are both working well.

Later in the month Peter, VE3BQP, participated in an exercise conducted up the Ottawa Valley, by acting as the Ottawa end of a Red Cross link, to test connectivity. He is also working to kit up some of the gear into usable portable packet kits. June 22 and 23 saw much Field Day activity, with members participating at a number of club sites, as well as some solo operations.

There seems to be a growing interest in the revival of the VHF packet system in the area, but as a more controlled network than in the earlier "everybody always on and digipeating" era. In the near future there may be some training on how packet fits into the communications plan. This would be more from the point of view of "how do you operate" than "how do you hook it all up". We need operators who can use the gear, not necessarily people who know what parameters to load into a TNC.

Renfrew County West (RCW)-ARES Group
Submitted by RCW-ARES Group Coordinator (EC) Bob Howard, VE3YX

The Renfrew County West (RCW)-ARES Group Coordinator (GC) Bob, VE3YX and AGC George, VE3GPD, met this May with the CEMCs of the Town of Petawawa and the municipality of Laurentian Valley. At both meetings, we described our group capabilities and discussed how and where we could locate our people and equipment near the EOCs when required. We also did preliminary investigations on permanent antenna locations on the buildings.

The Group was involved in three exercises during the month. The first was a setup exercise for the Reception Centre for the Deep River / Laurentian Hills Nuclear Emergency Plan. Next was a tabletop exercise of the Joint Traffic Control Centre also of the Deep River / Laurentian Hills Nuclear Emergency Plan. Lastly, GC Bob, VE3YX, was invited to do an ARES presentation at the beginning of a Pembroke MCG exercise.

Please see the Public Service / ARES column on page 47 for more information on these events.

On May 25, Yvonne, VE3RYA and GC Bob, VE3YX, attended the Eastern Ontario (Capital/Seaway) ARES District meeting in Rockland.

We are slowly increasing our supply of portable packet stations. We have three stations ready with two more in the works. This is in addition to two personal packet stations that are configured to be portable and a station permanently located at the Pembroke Red Cross and one at the MEOC in Point Alexander. In the coming months, we will work towards getting more of our group members up to full speed on Outpost.

The Renfrew County West (RCW)-ARES Group participated in a County-wide exercise called "Burning Bridges" on June 19 and 20. The scenario involved a forest fire occurring on a very hot dry day with resulting power outages, auto accident and evacuations. Please see the Public Service / ARES column on page 47 for more information.

On June 22 and 23, the RCW-ARES group along with the Renfrew County ARC set up a Field Day station in Riverside Park in Pembroke. As in recent years, it was a great social event, but not a huge number of contacts were made. It rained during the set up, but the thunderstorms held off until after we had taken down on Sunday afternoon.

Prescott-Russell ARES Group:
Submitted by interim PR-ARES group coordinator (EC) Lance Peterson, VA3LP

The Prescott-Russell ARES Group held a net every Tuesday evening at 9 pm. Three of the group members attended the District Meeting on May 25, Don VE3RM, Jean, VE3ZJS and Lance, VA3LP. One of our repeaters, VA3PRA in Alfred, had been down for an extended time and on May 21 Ron, VA3RRZ and interim EC Lance, VA3LP, climbed to the top of the Alfred water tower to inspect the antenna and coax, take SWR readings on the antenna and loss readings on the coax. In support at the bottom of the tower were Don, VE3RM and Harry, VA3ZAK, to take readings at the transmitter and record all the data. Everything was fine so the standby Motorola RPT was put into service and VA3PRA 145.470- MHz is back on the air. It appears to have a slightly less sensitive receiver, but the previous issues with the noise seem to have disappeared with the tightening of the coax connections. Only time will tell for sure.

In support of the ICS213MM demonstration at the ARES District meeting, the group earlier set up the system on May 23 and ensured that it was working in accordance with the demo and test requirements.

The group is still looking into how MESH can be utilized in Prescott-Russell and should have some limited capability by end of summer.

The Prescott-Russell ARES Group, along with the Prescott-Russell ARC Inc, spent most of the month planning Field Day. It was initially supposed to be at the Larose Forest control point, just south of Bourget. At the last minute, due to a requirement for liability insurance that could not be met on time, it was changed to the home of Don, VE3RM. With only a week to prepare for the change in venue, the group came through and on Saturday we were set up and running Field Day. One member, Harry, VA3ZAK, designed and built a hinged plate and falling derrick system to raise a 56-foot tower. This was a thing of beauty that one person can put together, add antennas and raise up the tower. On this was the VHF 2m and 6m antennas. It worked very well. In addition, Tulmar Safety Systems Inc. in Hawkesbury loaned the group an inflatable shelter that kept the participants and equipment dry for the duration. Unfortunately, we had some power problems on Sunday morning and had to cut our operations short at 10 am local. Like all exercises, this one provided the group with many learning opportunities and proved to ourselves that we are flexible and can adapt to changing requirements. Thanks to Don, VE3RM, for the use of his property for Field Day. Thanks also to all who participated: Chris, VA3NKE, Jean, VA3CO, Norm, VA3NPL, Joy, VA3YOJ, Lance, VA3LP and Wenda, VE3WMT. Special thanks to Louise Sproule who provided a wonderful supper for all on Saturday evening. And to Harry, VA3ZAK, for the week he spent designing, building, painting and sweating over his creation. It is now time to start planning for Field Day in 2014.

Stormont Dundas and Glengarry (SD&G)-ARES Group:
Submitted by SD&G-ARES group coordinator (EC) Earle DePass,VE3IMP

The Stormont Dundas and Glengarry (SD&G)-ARES Group's close association with the Seaway Valley Amateur Radio Club (SVARC) Inc, continues. During our last meeting held on May 22, updates on ARES activities were provided to the membership. Our expansion to "SD&G ARES" from the former "City of Cornwall ARES" continues.

The SD&G-ARES Group provided support for the Cornwall Children's Treatment Centre Bike-A-Thon 2013 that also served as an ARES Exercise for participating members. On Saturday, May 25, the SVARC Inc. and the SD&G ARES group provided communications as they have for the last six years, for this event. The Bike-A-Thon (http://www.ctc-sdg.com) held 13 events in which individuals arranged for sponsors to financially support this Centre for youth.

By using VHF RPT VE3SVC as the main and the RPT VE3MTA in Bonville as the backup, seamless communications were provided to all, along the entire route centred on the St. Lawrence College in Cornwall. Cellular service in this area along the St. Lawrence River has been marginal at times resulting in the annual request for our assistance to be present in case of injury to any of the participants.

The nine event participants were: Bert, VA3TL, Stan, VA3JSF, Elizabeth, VE3EZH, AEC Ed, VE3FHI (for Township of South Stormont), AEC Doug, VE3HTR (for City of Cornwall), John, VE3XAM, AEC Hal Green, VE3HWG (for Township of South Glengarry), Hermanna, VE3UNV, and group coordinator (EC) Earle DePass, VE3IMP.

The organizers were very satisfied with and glad for our help. Thanks go to all who helped.

– 73, Michael Hickey, VE3IPC

ECs reporting: VE3VY, VE3FFK, VE3YX, VA3LP, VE3IMP and VE3YX.

DECs reporting: VA3LP

OBS reporting: VA3BIX, VE3KII, VE3VY and VE3ZJS.

ONTARIO GTA SECTION REPORT

SM: George Duffield, VE3WKJ
ASM: Vic Henderson, VE3FOX
ASM: James King, VE3ETZ
SEC: Rick Harrison, VA3NV
SBM: Brad Rodriguez, VE3RHJ
STM: Vacant

MAY-JUNE SM REPORT:

Now that Field Day is behind us – and I congratulate all those Amateurs in the GTA Section who participated in Field Day – the focus shifts now for most Amateurs to the lazy, hazy days of summer and a bit of relief from the busy schedules of the winter and spring. Not that there are fewer community activities, but that the warmth of summer days bring a more relaxed status to the events, which reflect, for example, the jovial atmosphere of Canada Day celebrations, Fun Runs, CNE activities and so on. With autumn approaching, Amateurs in the GTA will be preparing for the National SET and the many fundraising community events that come with the cooler weather.

From an organizational perspective, I offer my thanks and a hearty welcome to stations Ken Grant, VE3FIT and Ralph Meucke, VE3VXY, who have agreed to become Official Bulletin Stations. There are more stations needed to perform this valuable service so if you are interested, please contact me or the Section Bulletin Manager, Brad Rodriguez, VE3RHJ.

I am pleased to report that the GTA Section is incredibly busy. As you will read in the information reported by some of the ECs, there has been a good combination of activities and training. The Section leadership group is attempting to provide information to the clubs on elements of EmComm and digital methods of communication and are attempting to have key individuals trained to the IMS 200 level.

There continues to be a major hurdle to overcome in this Section. As often as the clubs are told that the RAC management structure has changed and that clubs and individual members can have a major influence on policy, executives and members, with few exceptions, many still have not grasped or understood that the ball is in their court. There are grumblings across the Section that RAC is "not doing anything for the membership". Yet the membership is not informing RAC, at least not through this Section Manager, that they have ideas on how the organization can better serve its members, or even what they expect the organization to do for the members. Oh yes, there is grumbling. But what is grumbling without substance? A clanging gong? Not even the most responsive person can listen to a clanging gong for long.

So let me repeat: the members are in a position to drive the bus. Who is willing to get behind the wheel? How many are ready to commit time and share ideas in the continuing development of our National Association? How many are even willing to spend the time to tell me that I am wrong? And what do we do about Amateurs who are RAC members but not members of a club or those who are not members of a club or RAC? How do we serve this group of Amateurs? RAC represents every Amateur in Canada. We need your input!

As the Section Manager, I continue to make myself available to participate in club meetings and to meet with groups or individuals whether or not they are RAC members. To be a responsive organization, RAC needs to know what its constituents are thinking.

SEC Report:
Rick Harrison, VA3NV

Overall, GTA Section ARES groups seem active and involved in many activities and events.

A section Simulated Emergency Test was held on June 8 to test both repeater and simplex voice links to local government EOCs

and other served agencies. Brampton/Caledon, Mississauga, Georgetown, Oakville/Milton and Burlington ARES took part. Two metre simplex voice works surprisingly well.

A debrief meeting for the SET will be held on July 8 at the Region of Halton headquarters in Oakville. In addition to the debrief, ideas for the national SET this fall will be discussed. Further general discussion will also take place.

Glenn Marrett, VE3CEZ, the DEC for GTA West, is quite active taking part in many tests, public service events, courses and so on. He has his part of the section running smoothly.

Oakville ARES seems to be developing a relationship with the Oakville Fire Department (the Deputy Chief is responsible for the town's emergency management program). The Fire Department is installing, with Oakville ARES assistance, Amateur Radio equipment in the department's new mobile command post.

Both the weekly Oakville ARES net and the Halton Region Emergency Communications Team net continue to draw a reasonably good number of checkins.

Special thanks to Russ Schwandt, VE3JUZ (AEC Oakville ARES), for the many years he's served as an Official Bulletin Station bringing the weekly section bulletin to both of the above nets.

ARES groups in both Durham and York Regions are settling in with new leadership and I look forward to great things in the future.

GTA West:
DEC Glen Marret, VE3CEZ

On June 4 and 5, Glen, VE3CEZ, attended the Halton Basic Emergency Management Course with VE3OGP and VA3KRA also in attendance. On June 8, VE3CEZ participated in the Section SET.

On June 19, VE3CEZ met with SEC VA3NV to discuss results and some audio capture of Section SET. June 22/23 VE3CEZ participated in Field Day at the HRECT site in Oakville.

On June 24 and 25 VE3CEZ was asked by OBS VE3JUZ to stand in and present RAC bulletins on Monday and Tuesday nets.

Oakville ARES:
EC George Davis, VE3OGP

Members participated in the Section SET on June 8. The Halton Region EOC and the Milton Red Cross stations were activated. Our new callout tree was tested and lessons learned will allow us to improve the activation process. The following operators participated: VA3AZA, VA3BL, VA3CQC, VA3DDA, VA3JDA, VA3NV, VA3PRE, VA3PRS, VE3CEZ, VE3ITM, VE3JUZ and VE3OGP.

ARES members also helped out at both the Halton Region Emergency Communications Team (HRECT) and the Oakville ARC Field Day sites.

Brampton/Caledon ARES:
EC Richard Upfield, VA3RMU

Brampton/Caledon ARES participated in the Brampton Day celebrations on June 15 with our display and radio contacts on VHF. Thanks to VA3PB, VA3OG, VA3POR, VA3PM VA3RMU, VA3CWV, VE3REO and VO1XS for their help. We also participated in the local SET with other GTA clubs on June 8.

Recently, some of our members attended IMS 100/200 and EMS 200 training courses facilitated by the Region of Peel.

Burlington ARES:
EC Kevin Andrews, VA3KRA

On Saturday, June 1, Burlington and Oakville ARES and Hamilton SERV provided communications for the Olga's Boys & Girls Night Out 5K & 10K runs at Bayfront Park in Hamilton. Thanks to VE3TTO, VA3PRE, VA3SBB, VE3BK, VE3DWJ, VE3JNX and VA3KRA.

On Saturday, June 8 members of Burlington and Oakville ARES provided communications for the Rocca Sisters Healing for Women's Cancers 5K & 10K runs at Bronte Provincial Park.

On Monday, June 17, EC Kevin, VA3KRA, attended the Red Cross Halton Region Disaster Management meeting & BBQ. An ARES report was provided.

– *George Duffield, VE3WKJ*

DECs reporting: VE3CEZ

ECs reporting: VE3OGP, VA3KRA and VA3RMU.

OBS Stations reporting: VE3JUZ

QUEBEC:

SM: Vacant
SEC: Normand Pitre, VE2NHK
Email: ve2nhk@rac.ca

Le 18 Mai : le Club Radio Amateur Laval Laurentide a contacté votre Coordinateur d'urgence de section Normand, VE2NHK, et son assistante Coordinateur d'urgence de section Carole, VA2NDJ, pour leur bilinguisme.

Pour aller faire une démonstration Radio amateur à Kanesatake pour leur Journée porte-ouverte de sensibilisation aux mesures d'urgence. Aussi présent étais; Sécurité Civile, Sureté du Québec, service d'incendie locale, service ambulancier locale et des groupes de recherche et sauvetages.

Le 22+23 Juin : le Club Radio Amateur Laval Laurentide (CRALL) a tenu son « Field Day » a St-Eustache, sous la supervision de Benoit, VE2TBX.

Les bénévoles pour l'installation et la désinstallation sont Louis VE2LPS, Alonzo, VE2PKO, Pierre VE2THE, Stéphane Ouellette (sans indicatif) Simon, VE2SRP, Danièle, VA2DZZ, Laurent, VA2AWD, Luc, VA2TGO, Benoit VE2TBX, Yan, VE2YYH et son père.

Les amateurs qui on fait les transmissions sont Louis, VE2LPS, Simon, VE2SRP, Stéphane Ouellette, Luc, VA2TGO, Jean, VE2JCW, Fréderic, VE2ONR et Benoit, VE2TBX.

Merci à tous les participants sans oublier les amateurs qui ont prêtés l'équipements à L'an prochain.

Les clubs radio amateur; du West Island(WIARC), Montréal(MARC) et Université Concordia(CUARC) ont rejoint force ensemble pour opérer sous l'indicatif VE2CWI.

Voici la liste de ceux qui ont aidé d'une façon ou un autre : Charles, VE2RFI, Keith, VE2MTL, Sheldon, VA2SH, Samuel, VE2LJV, Berny, VA2BP, Malcolm, VE2DDZ, Paul, VE2OFH, Grafton, VE2KES, Dan, VA2KEY, Eamon, VE2EGN, Cliff, VA2UTC, Marc-André, VE2EVN, George, VE2NGH, Jason, VE2KYX, Craig, VE2YGK, Ken, VE2KLF, Gilles, VE2TZT, Steven, VA2SMF, Jim, VE2VE, Vern, VE2QQ, Louis, VA2LPQ, Vlad, VA2AN et Bob, VE2AXO.

On May 18, the Laval Laurentides ARC contacted your Section Emergency Coordinator Normand, VE2NHK and his Assistant Emergency Coordinator Carole, VA2NDJ, for their bilingual skills to do a demonstration of Amateur Radio in Kanesatake for their "Open-door Emergency Awareness Day". Also present was: Sécurité Civile, Sureté du Québec, the local fire department and ambulance service and some Search and Rescue groups.

On June 22 and 23 the Laval Laurentides ARC held their Field Day in St-Eustache under the supervision of Benoit, VE2TBX. Participants included: Louis, VE2LPS, Alonzo, VE2PKO, Pierre, VE2THE, Stéphane Ouellette (no call), Simon, VE2SRP, Danièle, VA2DZZ, Laurent, VA2AWD, Jean, VE2JCW, Fréderic, VE2ONR, Luc, VA2TGO, Benoit, VE2TBX, Yan, VE2YYH and his dad.

The West Island ARC, Montreal ARC and Concordia University ARC joined forces for their Field Day using the VE2CWI call sign. Participants included: Charles, VE2RFI, Keith, VE2MTL, Sheldon, VA2SH, Samuel, VE2LJV, Berny, VA2BP, Malcolm, VE2DDZ, Paul, VE2OFH, Grafton, VE2KES, Dan, VA2KEY, Eamon, VE2EGN, Cliff, VA2UTC, Marc-André, VE2EVN, George, VE2NGH, Jason, VE2KYX, Craig, VE2YGK, Ken, VE2KLF, Gilles, VE2TZT, Steven, VA2SMF, Jim VE2VE, Vern, VE2QQ, Louis, VA2LPQ, Vlad, VA2AN and Bob, VE2AXO.

– *Normand Pitre, VE2NHK*

RAC FIELD ORGANIZATION REPORTS

National Traffic System (NTS) Net Reports

Net (Manager)	Sessions	QNI	QTC
May 2013:			
Alberta ARES	12	–	0
Alberta Aurora (VE6TRM)	30	–	0
APSN (VA6IX)	30	–	0
BCEN (VE7XLH)		230	34
BCYTN (VE7WJ)		506	42
CECA (VE7GN)		47	9
MEPN (VE4LB)	23	403	5
MMWXN (VA4GD)	31	538	0
MRS (VE4HK)	9	309	0
MSMN (VE4AEW)	19	470	0
Laurentian (VE3AJB)	31	371	0
OPN (VE3XRC)	31	97	70
June 2013:			
Alberta ARES	12	–	0
Alberta Aurora (VE6TRM)	31	–	0
APSN (VA6IX)	31	–	0
BCEN (VE7XLH)	30	215	37
BCYTN (VE7WJ)	30	532	52
CECA (VE7GN)	4	50	9
MEPN (VE4LB)	25	285	3
MMWXN (VA4GD)	30	477	0
MRS (VE4HK)	9	307	0
MSMN (VE4AEW)	19	470	0
OPN (VE3XRC)	30	90	54

COMING EVENTS

THE HAMFEST AND FLEAMARKET CALENDAR

The following events are listed by date. Some dates and details are tentative.

OTTAWA (CARP) ANNUAL HAMFEST
Sponsored by the Ottawa ARC
Date: Saturday, September 7.
Time: Building Vendor Setup: 7:30 am to 9 am; Tailgaters Open: 8 am; Indoor Fleamarket Open: 9 am to Noon.
Place: Ottawa (Carp), Ontario; at the Carp Agricultural Fairgrounds (W. Erskine Johnson Arena); 3832 Carp Road (near Falldown Lane).
Description: The region's largest fleamarket and hamfest. Major door prize draws! We also have onsite Amateur Radio licence exams! Get your licence or upgrade during the hamfest!
Cost: $6 General Admission, $12/table (plus admission), $5/tailgate (plus admission).
Talkin: VE2CRA, 146.94–, 100 Hz.
Information: Ed Sich, VE3WGO, 613-963-8065; or contact <fleamarket at oarc.net>.
Webpage: http://www.oarc.net/fleamarket

KARC HAMFEST 2013
Sponsored by the Kingston ARC and the Military Communications & Electronics Museum
Date: Saturday, September 14.
Time: Vendors 7:30 am; Public 9 am.
Place: Kingston, Ontario; at the Military Communications & Electronics Museum, 95 Craftsman Blvd, Kingston, ON K7K 1A1.
Cost: Tables are $10 each; admission is a *donation* to the Museum.
Talkin: VE3KBR 146.940-, 151.4Hz tone.
Information: Douglas Richards, VE3FFR,
Terry Barret, VA3KLG, Steve Cutway, VE3KC; contact: <hamfest@ve3kbr.com>
Webpage: http://www.ve3kbr.com

SUDBURY-MANITOULIN HAMFEST
Sponsored by the Manitoulin ARC and Sudbury ARC
Date: Saturday, September 14.
Time: Vendors 7 am; Public 9 am.
Place: Garson Ontario; Garson Arena Community Hall, 100 Church Street.
Description: 3rd annual co-hosted Hamfest with commercial exhibitors, Amateur Radio enthusiasts, electronics, computers, many more. Complete facilities onsite including snack bar.
Cost: Tables only $10; tailgate only $7; General public admission $5.
Talkin: 147.000 MHz (-) PL 100 HZ.
Information: To book tables or for more info contact Bob Playter, VE3TKH, 705-859-3211 or randbp69@gmail.com
Webpage: http://www.ve3rmi.org

LARC 36th ANNUAL HAMFEST
Sponsored by the London ARC
Date: Sunday, September 22.
Time: Vendors: 8 am; Public 9 am to 12 noon.
Place: Hellenic Community Centre, 133 Southdale Road W (new location!).
Description: Commercial dealers, Free Parking, air conditioned, wheelchair accessible with handicap washrooms.
Cost: Tables $20;
Public $8 (age 10 and up).
Talkin: VA3LON, 147.060, PL 114.8.
Information: Contact: Ruth Dahl, VE3RBO, 519-455-9465 or larchamfest@gmail.com. See website flyer for info and directions.
Website: http://www.larc.ca

COMFEST 2013
Sponsored by Delta Amateur Radio Society
Date: Sunday, September 29.
Time: Public 10 am.
Place: Delta, British Columbia; the South Delta Recreation Centre on 56 Street just off Highway 17
Description: Amateur Radio swap meet.
Cost: $5.
Information: GI@deltaamateurradio.com
Webpage: http://www.deltaamateurradio.com

HARC HAMFEST 2013
Sponsored by the Hamilton ARC
Date: Saturday, October 5.
Time: Vendors 7 am; Public 9 am.
Place: Ancaster, Ontario; the Concession Building at the Ancaster Fairgrounds, 630 Trinity Road, Ancaster, L0R 1R0.
Description: An Amateur Radio, computer, and electronics fleamarket with parking and Snack Bar onsite. The RAC Annual General Meeting will take place at the Hamfest on Saturday, October 5 at 1 pm. See pages 16 and 17 for more information
Cost: General Admission: $7 per person.
Talkin: 146.76 (-) with tone 131.8 VE3NCF
Information: General info: John Boswell, VA3BOZ, <va3boz@hamiltonarc.ca> or at 905-227-0155. Vendor liaison: Mardy Eedson, VE3QEE <ve3qee@hamiltonarc.ca> or 905-648-0187.
Mail payment to: The Hamilton ARC, 117-350 King Street East, PO Box 75073, Hamilton, Ontario L8N 4G6.
Tables are reserved upon receipt of payment on a first come basis. Please book in advance to avoid disappointment.
Webpage: http://www.hamiltonarc.ca/index.php?module=htmlpages&func=display&pid=38

SARA FLEAMARKET
Sponsored by the Southern Alberta Repeater Association
Date: October 5.
Time: Vendors 10 am; Public 11 am.
Place: Calgary, Alberta; Eastside City Church, 1320 Abbeydale Drive SE, Calgary, AB T2A 7L8
Description: Free Parking; Free Coffee; Snack Bar with Famous SARA Dogs; Commercial Dealers. A map is available at: http://411.ca/business/map/6005347
Cost: Vendors & Public $5;
Tables $10 each
Talkin: 146.610 -600
Information: For more information or to reserve tables, call Ken Oelke, VE6AFO, at 403-226-5840 or ve6afo@cia.com
Webpage: http://saralink.ca/

NEAR-FEST XIV
New England Amateur Radio Festival
Sponsored by the New England Amateur Radio Festival, Inc.
Date: Friday, October 11 and Saturday, October 12.
Time: Gates open at 9 am Friday for sellers and buyers.
Place: Deerfield, NH, USA; The Deerfield

Fairground is located on Route 43 approx 15 miles NE of Manchester NH. GPS coordinates: N42d 5m 57.4" W71d 14m 33.5s (Lat 43.099286 Lon -71.242663.
Cost: $10 per person and $10 per vehicle into the fleamarket. Camping fees $30 a night. Tent sites are $15. All overnight fees are payable to the Deerfield Fair Association.
Talkin: K1JEK/RPT 146.700 MHz (-600 PL 88.5) 146.52 direct 3.885 MHz
Tune your car radio to FM 95.1 or AM 650 for continuous hamfest news and entertainment.
Information: W1RC@near-fest.com
Webpage: http://www.near-fest.com/

GREENWOOD FLEAMARKET
Date: Saturday, October 19.
Time: Vendors 8 am; Public 10 am.
Place: Greenwood, Nova Scotia; at the Greenwood Community Centre on Church Street.
Directions: Take Exit 17 off Hwy 101 to Kingston NS, then follow the signs to CFB Greenwood. Church St is just outside the main gate to CFB Greenwood.
Cost: Admission $4 per person.
Tables are free.
Talkin:147.24+, VE1WN.
Information: For general information or to reserve tables, contact Guy at ve1arc@rac or 902-825-6151; or GARC, Box 63, Greenwood, NS, B0P 1N0.
Webpage: http://greenwoodarc.org

MONTREAL SOUTH SHORE HAMFEST
Sponsored by the Club Radio Amateur Rive-Sud de Montréal
Date: Saturday, October 19.
Time: Vendors 6 am; Visitors 9 am.
Place: Longueuil, Quebec (10 minutes from downtown Montreal); Place Desaulniers, 1023 Taschereau Blvd Longueuil.
Description: The biggest Hamfest in Quebec. Accessible to handicapped persons. Restaurant. Free parking
Cost: Table $10 (individual entry not included); Visitors $7.
Talkin: 145,390 (-) ctcss 103,5 MHz, VE2RSM
Information: Martin Fournier, VE2DNF, 450-466-2810 or <hamfest@ve2clm.ca>. François Drien, VE2FDA, 450-672-9994 or <ve2fda@ve2clm.ca>.
Webpage: http://www.ve2clm.ca/articles.php?lng=fr&pg=120

WINNIPEG ARC FALL FLEA MARKET
Sponsored by the Winnipeg ARC
Date: Sunday, October 20.
Time: Coffee, muffins and eyeball QSOs 9:30 am; Vendor setup 9:45 am to 10:30 am; Buying begins at 10:30 am;
Prize draws 11:30 am.
Place: Winnipeg, Manitoba; at the Heritage Victoria Community Centre, 950 Sturgeon Road.
Description: Winnipeg's #1 social event for Amateurs, and a fleamarket.
Cost: $3 per person. Exact change preferred. Tables: $5 each for WARC members, $10 each for others. Contact Ruth, VE4XYL, ve4se@mymts.net or 204-837-6915 for tables.
Talkin: 147.39 MHz + offset 127.3 tone.
Information: For more info or to volunteer contact Dick Maguire, VE4HK, ve4hk@rac.ca or 204-256-3143.
Webpage: http://winnipegarc.org/

37TH ANNUAL YRARC HAMFEST
Sponsored by the York Region ARC
Date: Saturday, November 2, 2013
Time: Vendors 6:30; Public 9 am.
Place: Newmarket, Ontario; New venue Newmarket Community Centre, 200 Doug Duncan Drive, Newmarket, ON, L3Y 3Y9. Lat: 44.052761, Long: -79.455418.
Description: Free Coffee; Vendors galore in two separate halls; Wide aisles for scooters and wheelchairs; Exhibits and Demonstrations; Free Parking; Great Door Prizes; Refreshments; Grand Prizes; DXCC, WAS & VUCC Card Checking; Licensing Examinations (register with Hamfest Coordinator prior to the Hamfest to ensure we bring enough exams)
Cost: Admission is $7 per person for the General Public and Vendors.
Tables (six feet long) are $25 per table.
Talkin: VE3YRA: 145.350 MHz - Tone: 103.5 Hz.
Information: Contact hamfest.yrarc@gmail.com
Webpage: http://yrarc.org/index.php/our-hamfest

MAPLE RIDGE SWAP MEET
Sponsored by Maple Ridge ARC
Date: Sunday, November 3.
Time: Vendors 7:30 am; Public 9 am.
Open For pancake breakfast 8 am.
Place: Pitt Meadows, British Columbia; 12460 Harris Road, one Block South of the Lougheed Hwy in the old REC Building.
Description: Ham Radio & computer Swapmeet. The largest in the Fraser Valley. Great prices and lots of stuff. Pancake Breakfast Between 8 and 9 am. Concession will remain open during the event.
Cost: Public $4; Tables $20. Both admission and tables include one entry and a chance to win a radio.
Talkin: 146.800 -600 + Tone 156.7
Information: Call Nick 604 465-9476 Email: ve7te@mrarc.net
Webpage: http://www.mrarc.net

SPECIAL EVENTS

SPECIAL EVENT STATION HARRIS BARN RESTORATION
In commemoration of the restoration of the Harris Barn in Delta, British Columbia, the Delta Amateur Radio Society will be operating a special event station.
Date: September 7, 15:00 (UTC) to September 8, 5:00 (UTC). All HF Bands and Modes.
QSL information: QSL cards available for all contacts and work three or more stations and receive a downloadable certificate.
Information: All details can be found at http://www.deltaamateurradio.com

COPPER ISLAND CISA ACTIVATION
The Shuswap Amateur Radio Club will be undertaking the first activation of the only island in Shuswap Lake, British Columbia. Shuswap Lake covers an area of 120 square miles and has a maximum depth of 530 feet. This activation will qualify for the Canadian Islands Awards Program (CISA).
Date: September 21 and 22.
Place: Salmon Arm, British Columbia
Time: September 21 to September 22 1700Z-1700Z.
HF Contact Frequencies: 14.210, 14.110, 7.210 and 3.810.
Information: Contact rle73@telus.net. QSL Ron Essex, c/o Shuswap Amateur Radio Club, PO Box 2613, Salmon Arm BC V1E 4R5, Grid Square DO00HV
Webpage: http://www.sarc.ca/blog

SPECIAL EVENT STATION: VX31763 250th Anniversary of the Royal Proclamation of 1763
Sponsored by Robert Emerson, VE3RHE
Date: Sunday, October 6 to Tuesday, November 5.
Description: A Special Event Station commemorating the 250th Anniversary of the Royal Proclamation of 1763.
Frequencies: All HF bands (special attention to 6m, 10, 15m and 20m).
QSL: via VE3RHE (Bureau or Direct). Send Direct QSL request and Canadian stamps (or green stamps) with a return envelope to: Robert Emerson, 6950 Summer Heights Drive, Mississauga, Ontario, Canada L5N 7E9.
Logbook of The World will be available.
Information: ve3rhe@rac.ca
Operating schedule information: VX31763 on QRZ.com in early October 2013
Webpage: Further details will be available at: events.ve3rhe.ca/vx31763

DURHAM RADIO – SERVING AMATEURS FOR 20 YEARS!

"It's hard to believe that it has been 20 years!", says Durham Radio president Keith Carcasole. "There are so many exciting things that have happened along the way and there are more exciting things to come in the very near future so please read on."

Durham Radio started out in the fall of 1993 by offering products for radio enthusiasts that included items chosen specifically to set it apart from others in the industry. Like the others, they followed the trends by expanding lines whenever the market grew in any specific area.
CB radios, police scanners, Amateur accessories – all had their time in the spotlight, but unique products were always kept in the lineup.

Electronic kits were a unique line that they carried for many years. Kits were a lot of fun and Amateurs enjoyed making them. As the cost of kits went up and the cost of mass-produced electronics came down, interest in kits dwindled (not to mention that the quality and complexity of mass-made products went up).

Today, TV antennas are the hot item. More and more people are fed up with the high cost of cable and satellite TV and are quite satisfied to receive a dozen HD channels without monthly fees. Current unique products include low-cost, two-way radios, QRP transceivers, custom-made coaxial cable assemblies and pigtail adapters, microphone adapters and much more. In the USA, C. Crane sells a lot of unique radio products under their own name and Durham Radio is the exclusive distributor of Crane products in Canada. Items include a pocket radio with weather, a portable radio with a built-in MP3 recorder, a WiFi booster, pillow speakers and a lot more.

One thing that hasn't changed over the years is Durham Radio's commitment to customer service and community. The products may have changed over the years but Durham Radio is still one of those places with an antenna hanging from the ceiling where hams go on a Saturday to "check in" in person. When they need advice they gravitate to Lee, the sales rep with the porcupine car. He's the man with the answers!

Community spirit started in 1995 with the sponsorship of boys' soccer. That was followed by girls' baseball, boys' baseball, adult hockey (for many years), the Shrine Circus, Heart and Stroke Foundation, United Way and – well, you get the idea.

Durham also sponsored several Amateur Radio events including the Camp X special event station, the Polar Bear Express DXpedition, Belcher Island DXpedition and Shopping Cart Mobile in Barbados, all of which were covered in Amateur Radio magazines.

"Amateur Radio is also a community," says VP Alma Carcasole. "I have worked several ham fleamarkets for so many years that there is a genuine concern when I don't see a regular customer at a particular show. Hams ask about me if they don't see me at one of my regular shows as well."

Keith adds, "I never thought that Durham Radio would make me rich, but it has allowed us to pay the bills for the last 20 years and I am thankful for that. Our loyal customers continue to shop with us because they know we will support them by making sure they get the advice they require to choose the product that best suits their needs."

At press time, Durham Radio was working on their 2014 catalogue. Please contact your local Amateur club for info on how you can get one.

A 20th Anniversary Sale-A-Bration is in the works for October as can be seen on the ad on the opposite page.

What will be next for Durham Radio? Will they sell LED lights with low RF radiation? Will there be kits again?

Find out more by subscribing to the "What's New at Durham Radio" newsletter or by calling the store at 1-888-426-1688.

Unique items stocked by Durham Radio include:

1) YouKits 5W CW transceiver covering 15, 17 and 20 metres.

2) TygerClaw suction mount and stand for portable devices.

3) Reverse polarity SMA one to N female pigtail. Perfect for running low loss cable to WiFi routers.

4) RF adapter. SO-239 to N-female. Perfect for extending an existing coax run.

5) Send audio via Bluetooth from your phone or other compatible device to this great-sounding rechargeable AM/FM radio by Tivoli Audio.

6) Improve your reception with a Watson high performance scanner antenna.

7) The Radar Box hardware/software package allows you to track commercial air flights in real time. Features a 3D view of local and network traffic.

8) Jetstream aftermarket power cords for most Amateur transceivers. Other Jetstream products include antennas and power supplies.

9) UV protected double-braid rope for Amateur use. Various sizes available.

10) Buxcomm balun. We also stock Buxcomm multiband wire antennas.

11) Kaito low cost air band receiver. We also stock Kaito shortwave receivers and active antennas.

12) C. Crane "Solar Observer" AM/FM weather receiver with solar panel and hand crank generator for emergency use.

20th Anniversary Sale-A-Bration

We truly appreciate your patronage!

For exclusive offers, please visit www.DurhamRadio.com/flash

We Pay the Tax on ALL In-Stock Books

Tax Included on JETSTREAM Products

We Pay the Tax on ALL In-Stock Bulk Coax

Includes RG58U, RG58CU, RG6U, RG8U, RG8U Foam, RG174, LMR195, LMR400 Flex and more!

Mention this ad and get 50% off the labour charge for connector installation.

Tax Included on COMET Products

▼▼ SEPTEMBER SPECIALS ▼▼

20% OFF All MODE ELECTRONICS

20% OFF Grundig G3 AM/FM/SW/Air

Only $79.96

20% OFF All Antenna Rope

All sizes!
Bulk or 100' spool.

20% Dual Band Base Anenna

The UVS200 is 98.4" tall and provides 6/8 dB gain. 200W.

Reg. $89.95
Sale $71.96

▼▼ OCTOBER SPECIALS ▼▼

20% OFF All RF Adapters

20% OFF **DT-120 Clear**

Sangean high-performance AM/FM portable with see-through case.

Reg $49.95
Sale $39.96

20% OFF 715 **4" Amplified Speaker**

Perfect for hand-held transceivers, CB radios and scanners.

Sale $15.96

FREE Shipping on All Tivoli Radios

TAX INCLUDED SPECIALS ARE IN EFFECT FROM SEPT 1ST TO OCT 31ST 2013. ALL ITEMS SUBJECT TO AVAILABILITY.

DURHAM RADIO SALES 1993 20th ANNIVERSARY 2013 DurhamRadio.com

Winter Hours M-F 9-6 Sat 9-3

10-1380 Hopkins St., Whitby, ON L1N2C3

Tel: (905) 665-5466 Fax: (905) 665-5460

1-888-426-1688

www.DurhamRadio.com

VISA MasterCard Interac

The radio... YAESU

HF/50MHz 100W Transceiver

FT DX 1200

This medium-price HF Transceiver Excels on all fronts. The High Frequency Design Technology it has inherited, ensures "Best in Class Performance". The Outstanding Operability is Perfect for the DX Scene.

Superior triple conversion receiver, and optimum gain distribution at each IF stage will eliminate out of band unwanted signals.

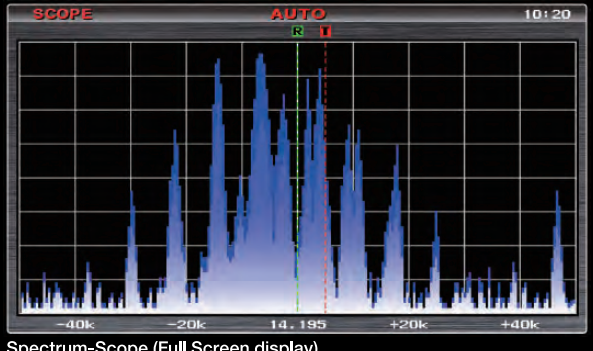
The 1st IF frequency is set at 40 MHz and is protected by selectable 3 kHz, 6 kHz and 15 kHz roofing filters, which effectively attenuate interfering signals.

Similar to the high end series Yaesu transceivers, it uses the 32-bit high speed floating point DSP, TMS320C6727B by Texas Instruments, for its IF DSP.
The acclaimed superior Yaesu DSP algorithm is highly effective in weak signal processing and enhancement.

The Full Color, 4.3 inch TFT display on the left side of the front panel, has a wide viewing angle and provides excellent visibility. It beautifully displays the various functions unique to this high class HF transceiver.

An optional built-in FFT-UNIT supports advanced functionality, including the AF-FFT Scope, RTTY/PSK31 Encode/Decode, CW Decode and CW Auto Zero-in.

The Full Color 4.3 inch TFT display



Spectrum-Scope (Full Screen display)

For latest Yaesu news, visit us on the Internet:
http://www.yaesu.com

YAESU
The radio

YAESU USA
6125 Phyllis Drive, Cypress, CA 90630 (714) 827-7600